NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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NOURSE, EATON & TOLMAN, PROPRIETORS. OFFICE...34 MERCHANTS ROW. SIMON BROWN, EDITOR. FRED'K HOLBROOK, HENRY F. FRENCH, ASSOCIATE EDITORS.

DECEMBER.

"Old Winter is coming again, alack!
How icy and cold is he!
He cares not a pin for a shivering back—
He's a saucy old chap to white and black—
He whistles his chills with a wonderful knack,
For he comes from a cold countree."

DECEMBER has come round again, and we must now prepare for that "three months of winter," and nine months of *considerable* "cold weather," which somebody says is the usual allotment.

There are various ways of preparing for the unwelcome tyrant, in order to make his reign as tolerable as possible, and it is curious to note the efforts for this end made by man and beast. The bear retires to his den, and "sucks his paws till spring," it is said, which we always considered a highly philosophical proceeding, besides being a great saving of food and fuel, to say nothing of wear and tear of nerves in bewailing those contingencies which cannot be avoided.

The birds, those summer friends of ours, [we hardly know whether it is quite fair to call those robins that stole all our cherries and strawberries, "our friends,"] most of them leave us, and sing their songs to other ears. The frog goes down somewhere out of sight, and never deigns another croak, till spring lets loose the streams and rivers once more. He greatly enjoyed his summer life in that pool with the yellow cowslips on its bosom, and the wild pines and hemlocks on its margin. The old moss-covered log that fell across it ten years ago, and has been slowly going to decay ever since, has got to be a kind of home to him, but he knows too much to put his head out such weather as this, so we will leave him to his meditations till next April.

And the dragon-fly and devil's darning-needle, which used to hold their carnivorous revels over that same pool, where are they now? Is it possible that creatures so insignificant, are remembered by the great mother Nature, and have had imparted to them the secret of self-preservation?

Go, lean over the tumble-down rail fence by that "frog pond," next summer, and you will be convinced that it is so indeed; for you will see, if not the identical insects that you knew a year ago, at least, their children and grand-children.

But man, the lord of creation, cannot shirk out of winter by retiring to his den, or diving into the mud, there to await returning spring. It is his to battle with the elements, and to turn their fury to his own account. Those animals which lie torpid during the winter, lose nothing thereby. To be active, would be to suffer; while they sleep, they are not falling behind the march of progress, but they will come out of their torpidity precisely on a level with the rest of their race. Yes, even the toad which lives a hundred years imbedded in a solid rock, will be no whit behind his fellow toads, who have enjoyed all the privileges of the age. But man cannot afford to lose three months in ignominious oblivion. There are planets to be discovered, Atlantic telegraphs to be invented, Great Easterns to be got to the Western Hemisphere, and balloons to be perfected; so he builds him a house for shelter, he has a fur coat to brave the northwester, and fires to make his dwelling of summer temperature. So to every creature, according to its degree, is given wisdom sufficient for its comfort and preservation.

The mere matter of warming our houses, by

the way, forms a pretty important item in our preparations for winter, and we are inclined to think the *ne plus ultra* has not yet been invented, and that a triumph still remains for somebody in this line. The old-fashioned fireplace is faultless as it regards ventilation, or as an ornamental object, merely, but it lacks the one essential quality of warming the room! You may sit and gaze at it in a poetic ecstacy, and see all manner of things in the coals, and think how your great grandmother sat by just such a fire, but you feel a cold wind playing about your ankles; you change your seat, and a blast sweeps over your shoulders, and creeps down the back of your neck; you change your seat again, and are greeted by a gale from that closet, which always howls as if it had a squalling child shut up in it, and you begin to think the customs of your ancestors may be improved upon in some respects. You next try an air-tight stove. It is an invention of the adversary, unattended by the proper ventilation. Why! a pair of bellows could not blow in such an atmosphere! But it is cheap, and *does* warm the room,—so air-tight stoves are almost universally used where wood alone is burned, and will be, till something shall be invented possessing these advantages, and some besides.

All furnaces are open to one objection. There is no "ingle-side" to gather around—no bright, cheerful fire to form a centre of attraction for the family group,—and the heat, moreover, is by no means as agreeable as that of an open fireplace, provided you could contrive to escape the draughts attendant thereon. But of all contrivances yet discovered for warming dwellings, manufactories, workshops, or public buildings, nothing is so healthful, so easily managed and cheap in the long run, as *steam*. A moderate amount of steam will pervade and warm a large room, much quicker than furnace or stove heat,—and as there are no outlets for the escape of air, there will be no cold currents as in the case of open stoves or fireplaces. The reason why steam is not more generally employed,—though it is now coming into use in private dwellings,—is the first cost of the fixtures. As the materials for conducting steam are expensive, and as the work must all be exact the first cost is higher than for any other mode of heating; but in the use of steam for a series of years, there is so much saving of fuel, that the cost of the fixtures would be paid for in that item.

Though keeping warm is a great desideratum, it is not the only thing to be attended to, for winter brings with it an entire change in our mode of life.

To the dwellers in cities, amusements increase, rather than diminish, as winter approaches. There are balls, parties, and theatres, for the pleasure-loving, operas and concerts for the musical, and lectures for the more sober-minded. In short, "the season opens" for all but the poor! and it opens to them with the sad question, how shall they keep off cold, and nakedness, and hunger and yet not be tempted to break the commandments, and covet or steal their neighbors' goods'

"Yes, winter is coming, and God help the poor!
I wish he were going away!"

Winter in the country—what a scene of desolation, where a few months since all was so calm and beautiful! Where the green leaves trembled in the breeze, naked branches now bend before the north-west wind. The houses which were softened and shaded by the trees and vines, now stand out in bold relief, like beauty bereft of the veil with which she delights to enhance her charms. The broad stretch of land which you have often likened to the

"Sweet fields beyond the swelling flood,"

are now one bleak, unbroken desert of snow,—and how the wind blows the snow about, down in the very spot where only a few months ago, little bare-footed children were out blueberrying, laughing, as they filled their baskets, with the ringing, happy laugh, which only children have!

No longer can you sit at your front door and watch the sunset, as it throws a glow on the tree-tops, and the church spire, and listen to the many voices with which nature is speaking, while you think of Abraham at the door of his tent, or Adam in the garden of Eden. No pleasant reveries, no quiet musings now. But still there is work to do—and the season brings with it the very energy which we need to accomplish it. Well is it for us that we have not to contend with the stern requisites of winter, without this additional vigor.

For the New England Farmer.

FARMING IN NORTHERN N. H.—BARNS.

MR. EDITOR:—At a distance, the barns are the most prominent objects upon each farm. There are usually two to four in number—each measuring about forty by fifty feet. They are well roofed with shingle and walled with single boards. They are so arranged as to form a part of a hollow square for the protection of the cattle-yard. The walls present a large double and two or three single doors, and a row of manure windows. A shed usually extends from one side. Through the middle of the interior extends the floor—upon one side the "bay"—upon the opposite the "stable" and "scaffold." A grain room often occupies a portion of the bay.

This is the most usual arrangement of our barns. Connected with it are many evils. From the number there is waste of building-material, space and labor. It certainly requires more material to build two or three small barns than one

barn covering an equal space. Proportionally less flooring would supply the one larger barn—and time and labor would be economized in feeding, clearing and stabling the cattle.

Improvements in barns have been made. Many have converted their two or three forty by fifty feet barns into one measuring fifty or sixty by ninety or one hundred feet—a floor extending the whole length. But these are not models. The form necessitates proportionally more floor building material than if it were more nearly square.

Again, many have increased their "barn-room" by making to one side of a barn of usual size, sufficient addition for a stable—and converting the old floor into bay and the old stable into floor. Thus the amount of stowage is almost double, at small expense. This is a profitable plan for those who are slowly but surely increasing their amount of hay and grain—and one that is extensively followed.

The proper protection of domestic animals, the making of manure, the economizing of labor and building material, the safe and convenient stowage of the bulky farm products, and the fact that much of the farmer's labor and nearly all his available property are in and about the barn for full one-half the year, render this the most important subject connected with agriculture. Saving as well as producing is necessary to successful farming.

But improvements in building are not so rapidly or generally diffused through the community, as those of the various farming implements. An improved tool may be manufactured and scattered among thousands of farmers, while an improved style of buildings would be unknown beyond the adjoining farms. Again, from the expense, an old cannot be often exchanged for a new and improved style of building.

This evil should be counteracted by engaging experienced builders—by offering prizes for the best plans and models at our fairs—and discussing the subject in the agricultural journals.

But more of this again. W. C.

Bath, N. H., Nov. 3, 1859.

COST OF FARM PRODUCTS.

In another column we give an article upon this subject, which may prove discouraging to some, but one which well deserves attention and critical investigation. We understand that the world is sustained by agriculture; that in it, it lives and moves and has its being; so there must be profit somewhere. Whether that profit is to be found among our New England people, is the question to be solved.

In looking over the items set down by our correspondent, we believe he has allowed about *twenty-six* days' labor as necessary to produce one acre of corn. On referring to the "Transactions of the Massachusetts Society for the Promotion of Agriculture," we find that in the year 1800, they sent out a series of questions all over the State, making such inquiries as would elicit replies likely to show the average cost of our common farm crops. Among these questions was the following:

"How many days' labor of a man are usually employed on an acre of Indian corn, including the getting in of all the stover and stripping the husks from the ears?"

No question among the *fifty* which they propounded brought so many widely-different answers as this.

Dr. Payne, of Worcester, set it at *ten* days; Dr. Hubbard, of Concord, at *fifteen*; Mr. Babbit, of Brookfield, at *sixteen*; Mr. Heath, of Brookline, at *fourteen*, and Mr. Gardner, of the same town, at *eighteen*; the Middlesex Society at *fourteen*; Mr. Kent, of Newbury, at *twenty*; Mr. Packard, of Marlborough, the same; and Col. Parsons, of New Gloucester, at *thirty-two*. The average of these returns gives *seventeen and two-thirds* days' work for a man to produce an acre of corn, beginning with the plowing and placing the corn in the bin. With the improved implements of the present day, we ought to be able to accomplish the work with two or three days' less labor than they did then.

The subject is an important one, and we hope it will receive careful attention.

EFFECTS OF HEAT UPON MEAT.

Prof. Johnston, in his Chemistry of Common Life, says that a well cooked piece of meat should be full of its own juice, or natural gravy. In roasting, therefore, it should be exposed to a quick fire, that the external surface may be made to contract at once and the albumen to coagulate, before the juice has had time to escape from within. The same observations apply to boiling; when a piece of beef or mutton is plunged into boiling water, the outer part contracts, the albumen which is near the surface coagulates, and the internal juice is prevented either from being diluted or weakened by the admission of water among it. When cut up, therefore, the meat yields much gravy, and is rich in flavor. Hence, a beefsteak or mutton chop is done quickly, and over a quick fire, that the natural juices may be retained. On the other hand, if the meat be done over a slow fire, its pores remain open, the juice continues to flow from within as it has dried from the surface, and the flesh pines and becomes dry, hard and unsavory. Or if it be put in cold and tepid water, which is afterwards brought to a boil, much of the albumen is extracted before it coagulates, the natural juices, for the most part flow out, and the meat served is nearly tasteless. Hence to prepare good boiled meat it should at once be put into water already brought to a boil. But to make beef tea, mutton broth, and other beef soups, the flesh should be put in cold water, and this afterward very slowly warmed, and finally boiled. The advantage derived from simmering—a term not unfrequent in cookery books—depends very much upon the effects of slow boiling, as above explained.

THE NORTH AMERICAN REVIEW AND AGRICULTURE.

We deem it a good sign of the times, that the leading literary publication of the country in its October number gives to the world an able article upon "Educated Labor."

The treatise of our associate, Judge French, upon "Farm Drainage," is made the principal text upon which the writer has based an elaborate article of twenty-five pages, which we should be glad to copy into our columns, could we find pace.

We recognize in the finished and classical style of this article, and in its bold and vigorous tone, the well trained mind of an old correspondent of the *Farmer*, formerly of New Hampshire, but now known, and hereafter, we doubt not, to be more and more distinguished, as Chancellor of the Washington University at St. Louis.

When such men as Chancellor Hoyt, of St. Louis, and Dr. Peabody, the learned editor of the *North American*, come before the public as the advocates of the interests of agriculture, we may well rejoice in the assurance that our cause will have, at least, a fair hearing before the world. In no way can we so well indicate the general drift of the writer of this article, as by a few extracts. See how "like apples of gold in pictures of silver" are his "words fitly spoken:"

"A nation is strong only when, like the fabled Libyan giant, it rests its feet upon the solid earth. Land is the basis of our power; the everlasting hills are the pillars of our imperial sovereignty. Men, in successive generations, may give themselves up in mad frenzy to slaughter and extermination; dynasties may follow dynasties in lengthening cycles of misrule and oppression; the refluent wave of barbarism may dash against the broken arches of a former civilization; palaces, temples, capitols, all the trophies of art, may pass away in the ages like the ephemera of a summer morning; but Nature is eternal, and the husbandman is her minister, and should be her interpreter."

Land drainage is the principal topic of discussion throughout the article, and the recent work of Judge French comes in for the following notice:

"Every book which sheds new light upon the principles and processes of agriculture in any of its departments, we welcome as a contribution to the public welfare. Such is the work whose title we have placed first at the head of this article. Elaborate in its explanation of methods, and lucid in its philosopical statements, it leaves little to be said by others on altogether the most important branch of American husbandry. It is tastefully printed and illustrated; and, if read at every farmer's fireside morning and evening with 'judicious care,' it would soon renovate the face of the country, clothing the exhausted fields at the East with fresh verdure, and turning the ocean-like prairies of the West, now to a large extent too wet for tillage or for health, into the very garden of the world. The author is one of those versatile, open-eyed men, whose constant and careful observation of minute and disconnected facts is happily accompanied by a rare power of analysis and generalization. He presents a pleasant combination of scholarly culture and practical energy, and is equally at home at the forum and in the field, discharging with singular tact the two-fold function of an accomplished jurist and a skilful tiller of the soil. He seems to receive from frequent contact with the earth fresh vigor for wrestling with hard questions of law. For many years associate editor of the *New England Farmer*, and special contributor to other similar journals, he has devoted the leisure wrung from a laborious profession to the study and practice of agriculture. His articles and addresses are not the mere speculations of a white-handed theorist, but they all have the flavor of fresh-plowed fields and new-mown hay. As a racy and instructive writer upon the various topics connected with the garden, the orchard and the farm, he has no superior and few equals in this country. He has the faculty of making all his resources, of whatever nature, contribute to the illustration of the particular subject in hand, no matter what that subject may be. The necessity of 'gratings at the outlet of drains,' in order to keep out all sorts of vermin, is not a very promising topic for pleasant rhetoric, and yet the pages occupied by him in its discussion sparkle with flashes from Virgil and Shakspeare, Coleridge and Matthew Prior."

"'There are,' he says, 'many species of vermin, both creeping things and 'slimy things that crawl with legs,' which seem to imagine that drains are constructed for their especial accommodation. In dry times it is a favorite amusement of moles, and mice and snakes, to explore the devious passages thus fitted up for them; and entering the capacious, open front door, they never suspect that the spacious corridors lead to no apartments, that their accommodations, as they progress, grow 'fine by degrees and beautifully less,' and that these are houses with no back doors, or even convenient places for turning about for a retreat. Unlike the road to Hades, the descent to which is easy, here the ascent is inviting; though, alike in both cases, '*Revocare gradum, hoc opus, hic labor est.*' They persevere upward and onward, till they come, in more senses than one, to an 'untimely end.' Perhaps, stuck fast in a small pipe tile, they die a nightmare death; or perhaps, overtaken by a shower, of the effect of which, in their ignorance of the scientific principles of drainage, they had no conception, they are drowned before they have time for deliverance from the strait in which they find themselves, and so are left, as the poet strikingly expresses it, 'to lie in cold *obstruction*, and to rot.' In cold weather, water from the drains is warmer than the open ditch, and the poor frogs, reluctant to submit to the law of nature, which requires them to seek refuge in mud and oblivious sleep in winter, gather round the outfalls, as they do about springs, to bask in the warmth of the running water. If the flow is small, they leap up into the pipe, and follow its course upward. In summer, the drains furnish for them a cool and shady retreat from the mid-day sun, and

they may be seen in single file by scores, at the approach of an intruding footstep, scrambling up the pipe. Dying in this way affects these creatures as 'sighing and grief,' did Falstaff,—it 'blows them up like a bladder.'"

As to advantages of Drainage at the West, Dr. Hoyt remarks:

"It is to be remembered that the agricultural districts of this country are lower and flatter than those of England, and that they receive double the amount of rain-fall per annum. We have no doubt that the value of the prairie lands in Illinois, Indiana, Iowa and Missouri might be at least trebled by a proper distribution of drain tiles, four feet under ground. Corn, instead of being dropped into sub-aqueous drills from a raft, in June, with poor prospect of a harvest, might be planted on dry ground, early in May, with an assurance of reaping a hundred-fold. Wheat, no longer frozen out of the clayey soil every winter, might yield, not twelve, but, like John Hudson's on his Castle Acre farm, 'forty-eight bushels to the acre.' The farmers themselves, now shaking with intermittent chills amidst the noxious miasmata that rest like a pall upon coarse sedge and miry pools, might riot in fragrant clover and luxuriant health."

The following remarks forcibly express the principles which we have constantly advocated in our columns and elsewhere, wherever our voice could be heard.

"Every profound thought lifts a shadow from the earth. Every good book, whether it treat of "Farm Drainage" or "Celestial Mechanics," helps forward the millennium.

"The advantages of intellectual culture are as obvious in those pursuits involving manual labor, as in the learned professions, so called. A good education is of some consequence to the lawyer and physician; it is of not less consequence to the mechanic and the farmer. We have known professional men who could make a little learning go a great way with the wondering multitude; but such poor tricks cannot be played off upon the hidden forces of nature. It is the finger of Intelligence alone which can touch the secret springs that set the mountain streams to the music of machinery, and clothe the naked fields with waving grain. It is a maxim in New England factories, where a fluctuating and often hostile tariff has taught a wise economy, that they cannot afford to hire cheap, ignorant labor. Not many years ago a factory in Lowell imported a large number from England. But it turned out that these persons, though paid but half the wages of the better-educated operatives at home, were nevertheless an expensive luxury to their employers. They could not earn their living, and, in a few weeks, they were all, with three or four exceptions, dismissed. A partner in one of the most respectable mercantile houses in Boston, having the principal direction of extensive cotton-mills, stated, a few years ago, in reply to the interrogatories of a Congressional Committee, that, of the twelve hundred operatives annually employed by him, forty-five only were unable to write their names; and that the difference between the average wages of these forty-five and of the remaining eleven hundred and fifty-five was just twenty-seven per cent. in favor of the latter. There were also in the same mills one hundred and fifty girls who had been engaged in teaching school. The wages of these schoolmistresses was seventeen and three-fourths per cent. above the general average, and more than forty per cent. above the wages of those who were obliged to make their mark. It is safe to affirm, that there is not a cotton-mill in the country, with operatives, whether native or foreign, too ignorant to read and write, which could be made to yield a profit in the best times. The fabrics would be inferior in quality and in quantity; the machinery would be misused and prematurely worn out; and the stockholders would be soon brought to a realizing sense of the difference between dividends and assessments."

The following sly hit at our political aspirants, deserves to be repeated: "We may in accordance with a well-known political principle, select for our premium crop a piece of land, which, like a candidate for some high office in the nation, has a southern exposure, and which will, therefore, receive a greater number of solar rays on a given area than a northern slope or a horizontal level."

We hardly know where to stop in our extracts from this article. Every page abounds with sentences which are worthy to be written in letters of gold and displayed on the door-posts of every farm-house in New England. The dignity of labor, the superiority of force guided by intelligence over mere physical power, and the importance of cherishing a taste for the beautiful in the farmers' home, are among its prominent topics.

Then the writer, by various illustrations, brings out clearly to view the advantages of scientific knowledge to the agriculturist, showing the effect upon vegetation of *heat*, of *light*, of *air* and of *moisture*, and as incidental to those essential conditions of vegetable growth, the importance of thorough drainage and deep culture.

Then follow some carefully considered remarks upon protection of crops from insects, showing that the farmer has in the insect world friends as well as foes, and the necessity of his knowing how to discriminate between his friends and foes.

Then we have a kind word for the beautiful singing-birds, and finally an exhortation to cherish our *Home*, as the centre of all true civilization, with which we must take leave of an article which we trust will be generally read throughout the country.

"How shall we render our homes more pleasant and attractive? Some one has said that the three most beautiful words in the English language are Mother, Home and Heaven. They naturally go together, either of them implying the two. The great error in Plato's Republic is

his subversion of the family. No mere 'community,' whether foreshadowed by a Grecian philosopher or organized by a French Socialist, can develop in men the deepest sympathies and the highest energies of their nature. Sunder the ties which unite them in family groups, and the incentive to labor is gone. The sweet charities and beautiful amenities which spring up and flourish in the magic circle of home, cannot take root by the wayside of a nomadic life. They require 'a local habitation.' Family and property are correlative terms; the love of the one creates a desire for the other. The incentives which impel men to the drudgery of the shop or field lie in the fact that they 'have given hostages to fortune;' that they can in reality, or in prospect, enjoy the fruits of their industry around some warm domestic hearth-stone.

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There are many homesteads which are not homes. Philosophically speaking, a true home has an attractive outward seeming and a luminous inward life. To secure the former, there must be some architectural fitness about the buildings, and an exhibition of good taste in the grounds. To secure the latter, there must be books, social and intellectual culture, and the hallowing influence of every Christian virtue. Human beings may exist in a habitation whose uncouth ugliness, concealed by no overshadowing tree or climbing vine, is a pain to the eye. They may accustom themselves to its shapeless deformity; to the rude inconveniences which fruitlessly exhaust time and strength; to the 'ear-piercing fife' of half-starved squealing brutes, looking wistfully from hollow eyes, like animated 'anatomies of melancholy,' or wallowing in impassable mud before the kitchen door; to the stercoraceous stenches which, exhaled from contiguous manure-heaps, do not 'waste their sweetness on the desert air,' but pour through the windows, checked by no intervention of 'shocking bad hats,' and neutralized by no fragrant breath of flowers. Such a place is not a home, but rather a lair for wild beasts; and the children who come forth from it will carry its taint and its barbarism to the grave.

A fine-looking house, on the other hand, like a fine-looking woman, cannot but exert a cheerful and elevating influence upon the community. There is a renovating power in every object of beauty and of worth on which the eye of man can rest. Steele was not extravagant when he said of a certain lady, whom the poet Congreve had admired and celebrated, 'that to have loved her was a liberal education.' We always grow into the likeness and catch the spirit of our surroundings.'"

TREATMENT OF GARGET.

Within a year or two past some of our cows have been troubled by one quarter of their udders becoming hard, and would give bloody milk for a few days, then would dry away and lose the use of it entirely. G. M. K.

This is a clear case of garget, and if taken early, the remedy is simple; but first it is an inflammation of the bag or one or more of the quarters, and arises from various causes. Almost universally it is accompanied by coagulation of milk and a sluggish circulation, except in these spots where the inflammation is intense. The cure in the early stages is effected usually by kneading the bag, frequent milking, and washing with warm soap and water, or spirits and water, or both; often, however, the bag is so sensitive that the cow will neither allow the calf to suck nor the udder to be touched, even. The use of *Tincture of Arnica* has come in great repute for the allaying of this sensitiveness. Its effects are wonderful. We have known this tried, when immediately, a cow with a most painful udder, at once permitted it to be pressed and worked by the hands, washed with soap and camphor, etc., allowing the application of any of the common remedies.

We advise in this and similar cases to use arnica at once. Take tincture of arnica and dilute it with twice as much water, or rum and water, and wash the bag with it. Then milk and knead it, and then let a hungry calf take a turn at it awhile; wash thoroughly with soap and water, and then anoint with sweet oil.—*Homestead.*

ABOUT DRYING APPLES.

October and November are the best months for drying apples, and the well-ripened, choice fall varieties are by far the best for the purpose. Some people have an idea that anything in the shape of an apple, big enough to pare, cut and core, let the flavor be what it may, is just as good for drying as another. We beg leave to correct this error. It is just as important to have a good apple to dry, as to eat raw, cook or bake. To those, therefore, who want good dried apple, we will offer a few suggestions.

1. Let your apples be of good size, fair in shape, choice in flavor—sweet or tart, as you may prefer; both are good for a variety of purposes. They should be gathered without bruising; laid by till nearly ripe, but not quite ripe; pared with a machine—if you have a good one and quartered, or half-quartered, according to the size of the fruit, or the use to be made of the article when dried.

2. Let the work be done as rapidly as possible, for the fruit may ripen too fast after beginning to do them, and keep the cutting and coring up with the paring; for the moment the open flesh of the fruit becomes exposed to the atmosphere, or heated, it begins to lose its aroma, moisture, and flavor, all to the damage of its quality when dried.

3. If you choose to string them, which may be done, or not, as you prefer, do it as soon as you can. We should not dry thus, preferring wire-racks for the purpose. Then instead of hanging them up by the side of the house, in the sun, or in the kitchen, where millions of flies will alight upon, and live on them for several days, put them in a kiln, or drying-room, with a heat of a hundred degrees of thermometer. Let the kiln be ventilated at the bottom and top, to pass off the exhaling moisture, but not enough to make a perceptible draft through it.

4. When the drying heat has sufficiently closed the pores of the cut fruit to prevent the escape of its aroma, the heat may be modified ten or twenty degrees, and so continue until they are

sufficiently cured for storing away, which may be known by breaking a few pieces, and the absence of any settled moisture in the flesh, showing fermentation.

5. When sufficiently cured, pack them away in small bags, or sacks, not closely crowded in, but as they will naturally fill; tie them closely, and hang them to nails on the side of a dry room. They will thus keep indefinitely, or till you want to use them.

A well selected apple, properly pared, cut, cored and cured, is one of the best luxuries of the table, while indifferent varieties, carelessly worked up, strung and dried in the kitchen, half covered with flies, fused with the steams of cookery, dust, and the accumulations and exhalations of an open and disordered living room, are not fit to eat, nor even to sell. We have seen apples dried after the latter fashion, even in the households of otherwise tidy people; and to those who are in the habit of doing so, we say, try the other plan, and if they do not acknowledge it a better way, in every possible use an apple can be put to, call upon us for the difference in expense. —*American Agriculturist.*

For the New England Farmer.

CALEDONIA COUNTY FAIR.

MESSRS. EDITORS:—The annual fair of the Caledonia County (Vt.) Agricultural Society was held upon the new fair ground in St. Johnsbury, Sept. 28th and 29th; and the grounds were occupied by the company for a trial of speed and equestrianship, the 30th. The weather during the last two days was exceedingly fine, and the exhibition, as a whole, was considered a complete success. The ground has been in preparation for about two years, and at an expense of nearly $8000, has been put in readiness for the present year's exhibition. It comprises twenty acres of land, and is surmounted by a substantial fence. The chief building, comprising the Ladies' or Floral and Mechanics' Halls, is 240 feet in length; the principal part two stories high, with an observatory. The judges' stand is a very convenient little building, of two stories from the ground, the judges occupying the first and the music the second story; the lower or ground floor is finished for a committee-room. Both buildings are very conveniently arranged, tastefully ornamented and well painted. Directly in front of the judges' stand are elevated seats for the accommodation of those desiring them. Within the enclosure is a half-mile trotting-course, which is well made, and properly guarded by a railing on each side. As a whole, probably this fair ground is second to none in the State.

But to the fair. The first day was devoted principally to the show of stock. There was a large number of cattle present, particularly oxen. The town of Waterford led in this department, presenting 111 pairs. St. Johnsbury, also, presented 75 pairs; many from both towns being extra cattle. The show of bulls, milch cows and young cattle, generally, was good, some of them possessing very fine qualities. The Devons and Durham bloods are most prevalent in the county, although there are many fine specimens of the Ayrshires and Herefords, each possessing their peculiar "superiorities," as claimed by their owners.

The exhibition of horses, including stallions, matched spans, mares and foals, and roadsters, was a credit to the county, many very superior animals being present. They are principally of the Morgan blood, and exhibit very generally, their especial traits of character.

The number of sheep was not large, but there were some fine specimens—bucks in particular, which were worthy of note. The show of swine was similar to that of sheep; few in number, but good in quality.

The second day was devoted more particularly to the display of horsemanship, the ladies' handiwork, mechanical exhibitions, and the balloon ascension, by Mr. Wise. The display of matched horses was unusually large; there was, also, a very good show of stallions and roadsters.

But the great central point of attraction was Floral Hall. The ladies did nobly, in adorning and beautifying their apartment so extensively with their rich handiwork. Nearly 400 entries were made for premiums, besides many which were presented merely for exhibition. There were some fine specimens of painting, hair-wreaths and embroidery, which exhibited much taste and skill on the part of the ladies of the county. Mechanics' Hall contained specimens of high order, which, together with Floral Hall, formed a very interesting feature of the fair.

The show of farm products and garden vegetables was very good, considering the season. Corn, potatoes of extra size, pumpkins, squashes, melons, onions, turnips, peas, beans, tomatoes, &c., were numerously exhibited. The display of fruit was quite meagre, but little having been raised in the county, the present year.

The ascension of the aeronaut was a capital affair. The day was unusually favorable, it being very fair and the sky clear. Mr. Wise ascended at about 3 o'clock, and after an aerial voyage of about an hour and a half in duration, descended in an adjoining town only ten miles from the point of starting.

The third day was occupied in exhibiting the speed of horses, either in or out of the county, and by a display of equestrianship. There were several horses entered to compete for the premiums offered by the fair ground committee, but no very fast time was made. The fastest was 2.45 by "Arctic Maid," a horse owned by Charles B. Ballard, of White River Junction, Vt. E. H. Gilman's "Baldwin Horse," of Bradford, made the same time.

Five *equestriennes* displayed their skill in horsemanship very satisfactorily. They made a good appearance, and did their work admirably.

This was followed by a display of equestrianship by eight young lads, who came forward like so many marshals upon a muster-field, and did themselves honor in their exhibition of horsemanship.

Thus ended Caledonia County Fair for 1859. It was estimated that twelve thousand people were in attendance, which is sufficient proof of its popularity and success. I. W. SANBORN.

"The Meadows," Lyndon, Vt.

There is many a man whose tongue might govern multitudes, if he could govern his own.

THE HONEY, OR SWEET, LOCUST.

The Honey Locust, *Gleditschia triacanthos*, is common in New England, but flourishes best in the Virginia valleys, or on the fertile bottoms which are watered by the streams emptying into the Mississippi river. We have seen it in great perfection and beauty growing on the banks of the Potomac river, with the spurs or thorns ten inches in length. Michaux measured several stocks in Ohio, which were three or four feet in diameter, and, which appeared to equal in height the loftiest trees in the immemorial forests of that State. Some of them had the trunk undivided for forty feet. This plant makes admirable hedges when properly trained, and endures the climate well. We have one which has been growing ten years, and presents so many sharp points that few animals would venture to pass through it. We copy the engraving, by permission, from WARDER'S Hedges and Evergreens, published by A. O. Moore, N. Y.

The sweet locust is easily known by its bark, which, at intervals of a few inches, detaches itself laterally in plates three or four inches wide and two or three lines thick, and by the form of its trunk, which appears to be twisted, and which presents three or four crevices of inconsiderable depth, opening irregularly from the bottom towards the top. The large thorns which cover the branches, and frequently the trunk of young trees, afford another very distinct characteristic. These thorns are sometimes several inches long, ligneous, of a reddish color, and armed, at some distance from the base, with two secondary thorns, about half the size of the first.

The leaves of the sweet locust are pinnated, and composed of small oval, serrate, sessile leaflets. This foliage is elegant, and of an agreeable tint; but it is thin, and scarcely obstructs the passage of the sunbeams. It is shed annually at the approach of winter.

The flowers are small, not very conspicuous, and disposed in bunches. The fruit is in the form of flat, crooked, pendulous pods, from twelve to eighteen inches long, and of a reddish-brown color. The pods contain brown, smooth hard seeds, enveloped in a pulpy substance, which, for a month after their maturity, is very sweet, and which then becomes extremely sour.

PERUVIAN GUANO.

We find an article in the papers stating that the importations of Peruvian guano have greatly decreased. We are glad of it. Not because we think the article is worthless in itself—but because we are satisfied that the extravagant prices demanded and paid for it, make it worthless to the farmer. We are glad the importations are falling off, because the prices fixed by the Peruvian government are exorbitant and unfair, and such as ought not to be submitted to, if there is any way of preventing it; if not, let us refuse to purchase a single ton of it. It ought to be afforded in Boston for less than $40 a ton. The American guano is a safe article, and is probably

as good a fertilizer as the Peruvian, and we predict that vast quantities of it will be sold the coming year for $40 or less, per ton.

The quantity of guano shipped from the Chincha Islands in 1857, was 490,657 tons; in 1858 it was 266,709 tons,—a falling off in a single year of nearly one-half. In the first six months of 1859, it was 46,577 tons, a much smaller amount than at the same time last year.

The quantity of guano on the islands has been computed at three millions of tons—an amount absolutely inconceivable by any of us, and yet, with thousands of vessels lying idle at the wharves for want of employment, we are told we must pay $65 per ton for the Peruvian guano! We should be glad if all our people would refuse to purchase another pound of it.

For the New England Farmer.

THE YEAR CROWNED WITH GOODNESS.

And when, Messrs. Editors, have we seen a year that was not? All not equally so, but enough every year to fill all hearts with wonder, gratitude and praise. And yet, how many complaints are uttered every year of cold, backward spring, of late or early frosts, drouth, blighting, hail, wind, insects or something else destructive to the crops and ruinous to the hopes of the husbandman! But has any man living ever seen a year crowned with wrath? Would such a year be strange? Shall unthankful and disobedient children receive, year after year, only good at the hands of God? This is not the manner of men. God's ways are not our ways, nor His thoughts our thoughts. He causeth His sun to shine on the evil and the good, and sendeth the rain on the just and on the unjust. What living man, indeed, has ever seen such a year of scarcity and want as we read of, 2 Kings, sixth chapter, when an ass's head was sold for four-score pieces of silver, (about $40,) and a fourth part of a cab of dove's dung, (supposed to be an almost worthless vegetable resembling dove's dung,) for five pieces of silver (about $2,50); or, when one mother said to another, "Give thy son, that we may eat him to-day, and we will eat my son to-morrow." Had we ever witnessed one such year, it might cure our complaining, and inspire our hearts with gratitude for years of no greater abundance than the present.

I have been young, Messrs. Editors, and now am old, yet I have never seen a year that was not crowned with goodness, especially as respected the productions of the earth. I remember that in my boyhood, the crops were sometimes shortened by drouth, insects, or some other cause, and there were no such facilities then as now, for getting supplies from a distance. I remember going to mill, ten or twelve miles, on horseback, with the last bushel of corn, and then going into the field, and gathering the first ripening ears, and drying them in the sun, or by the fire, for the next grist. But still we had Thanksgivings, and thought we had something to be thankful for. But now, instead of "eating and giving God thanks," as was then customary, I often hear complaints (Moses might call them murmurings) of bad weather, unfruitful seasons, light crops. Have we not, at this moment, much greater cause to speak of His goodness? "O, that men would praise the Lord for His goodness."

My father, who has long since gone to his rest, used to tell us of a British soldier, who remained in this country after the Revolutionary war. He said he never saw such complainers as the Yankees were. It was always too wet or too dry—too hot or too cold; and if there came ever so pleasant a day, they were suspicious of it. It must be a weather-breeder. I have often marvelled, after hearing the complainings of people in spring and summer, to see what crops they have gathered in the fall.

The years vary. Rarely does the earth yield every kind of crop in abundance. Indian corn and the smaller grains, wheat, rye, &c., do not often yield largely the same year. In some localities in this region, there is but little fruit, and corn will be light. All other crops are not often better. It seems good to see potatoes come out of the ground free from rot, and of good size and quality. Some old writer has said, "He that will observe providences, will have providences to observe," and he will often find that what, at the time, seemed a judgment, was a real blessing.

Some five or six years since, we had a very warm April, and it hatched out an innumerable multitude of grasshoppers. But in the early part of May there came, not merely a frost, but a hard freeze, which killed them before their depredations became visible. The frosts of last May and June had a similar effect. Some years it has seemed as if the grasshoppers would devour every green thing. This year, there have been but very few. I did not see one until the 18th of July, and he, though pretty fully grown, had been so excluded from the air and light in the thick grass, that he could neither fly nor hop. I doubt not that frosts in May and June that nip our vines, and are regarded as a calamity, do much less injury than would be done by the insects which they destroy.

Let, then, farmers of every class learn this consoling truth, that whatever else may be wrong, He that ruleth the weather and causeth the earth to yield her increase, understands His work, and doeth all things well. N. S.

Monadnock, No. 4.

BUCKLIN'S IMPROVED HARROW.

Messrs. HOBART and SPAULDING, of East Pepperell, Mass., are introducing a new implement called *Bucklin's Improvement in Cultivator and Harrow Teeth*, one of which we have used several times, and on different kinds of soil. It is a heavy implement, and requires a strong team, and when provided with it, accomplishes a great deal of work in a given time. On wet lands, the soil adheres to the teeth—the teeth being somewhat in the form of cultivator teeth—and consequently the draft is heavy; on sandy loams, it will bring a newly-turned sward into a finely pul-

verized seed-bed, so that the labor of planting and hoeing is very light. Our use of it has not been sufficiently extended to justify a positive opinion in regard to its merits, and we can only say, as we do of all implements and machines, that the farmer should be slow in adopting them until he has given them personal attention and investigation.

For the New England Farmer.

CROPS IN ESSEX COUNTY.

Messrs. Editors:—Below may be seen some statements as to the yield and quality of crops in this town and vicinity.

Although the nature of the season has been favorable, our people have realized only a fair crop of English hay; but it is of the finest quality, having been well matured in growth and cured in the best order; some stubbles have come in well, while old bound-out lands have produced light burdens. A few fields have produced two tons per acre, but in such cases the ground has received outside dressing, or has lately been laid down. Although some of our farmers have given their attention to the improvement of mowing lands by converting intervales and previously unproductive land into English mowing, yet, generally, this is not the case, and though the present progressive age calls loudly for such improvements, there are hundreds of acres still in the crude state, only waiting to be turned upside down and sown to hay seed to produce the owners two tons of hay to the acre.

The meadows on Mill's river, and the "River Meadows" in Topsfield, have produced well. Some seasons, when heavy and early rains fall, these valuable meadows are flowed, and in many cases cannot be cut during the season. This year they were cut early, and are well secured.

Rye has yielded well, and is of very good quality. Some pieces of winter rye were so stout as to make harvesting quite slow and difficult.

Barley generally yields well, has a good kernel, and pays as well for the land and labor as any kind of grain grown by our farmers.

Oats are raised to some extent, and peculiar soil in favorable seasons will produce oats of a fair quality, but I have never yet seen among the farmers in our own community oats that would begin to compare with those produced in Vermont and Canada, either in quantity or quality.

Pastures became short very early in the season, and of course, this has essentially diminished the products of the dairy. Mr. Preston Lovering, of this town, informs me he has thus far, in feeding his stock of twenty head at the barn, consumed over three tons of English hay. Cutting "second crop" this season is quite out of the question.

Corn, owing to the early frosts, heavy rains, no drying winds following, has proved next to a failure. The ears have very sharp tips, though more in a hill than some seasons, and the husk has lain so close to the ear, being so green and moist, that in some instances sprouts of half an inch long may be seen on the ear. While there are some good fields, the universal cry is poor corn. Mr. Wm. Potter has a field containing ten to twelve acres of heavy corn, which, on account of its size, and the quality of the corn, is worthy of notice. This field was planted early, on a large plain, and manured well—the ears are large and well filled out, and the yield, per acre, though not known, must be great for this region. Truly, twelve acres of heavy corn upon a plain is no mean sight! Mr. Potter has, in all, about fifteen acres of corn.

Potatoes are better in yield and quality than for several years past. The disease, which has been slight, did not commence till quite late in the season, and fortunately, (providentially, we may say,) that most valuable of vegetables has, to a great extent, escaped the rot, and we have reason to hope that the fatal epidemic will soon disappear. The quality of potatoes this season is particularly spoken of, both in grain and flavor. The "Jackson White" and "Scotch Apple" are of the very finest quality. Potatoes yield from ten to sixteen hills to the bushel. Mr. Jarvis Lamson, a good farmer here, who raises large quantities of produce, I am informed, is digging potatoes, where they uniformly turn out at ten hills to the bushel! The Chenango, which has been so highly esteemed for years past, and which has rotted the most extensively with us, has become quite unpopular, and seldom planted.

Onions are extensively raised on the place of Mrs. Saunders, of Salem, superintended by Mr. James Manning. Good crops have been realized for a few years past, but the crops of last season and the present, here, suffered from the maggot. Some two thousand bushels a season have been raised on this place.

Pumpkins and squashes did not suffer so much in the early part of the season from bugs as in former years, and have yielded a good supply for family use.

Pears and peaches are not produced among us to any extent. Some gardens have afforded a few bushels of that most delicious fruit, the "Bartlett pear," which have readily brought from $4 to $5 per bushel.

Apples are few and far between, generally, though some orchards will yield a surplus above home demand, and some others will just supply the wants for family use.

The cranberries, owing to the early frosts, will not be equal in quantity, if they are in quality, compared with past seasons. The grass and bushes which grow among the vines and shade them, serve to protect the fruit from the effects of frost and therefore these should never be mown off.

Z. A. Appleton.

Hamilton, Oct. 10, 1859.

Annual Meeting of the Massachusetts Horticultural Society.—The annual meeting of the Massachusetts Horticultural Society took place in their building in School Street. From certain causes well understood among the members, but of no public concern, there was an unusually full attendance, and much interest was manifested.

Three tickets were in circulation for officers of the Society for 1860—all, however, bearing the name of the present very acceptable President, Joseph Breck, Esq., for re-election, and differing only in a few of the candidates presented for

some of the minor offices. The following was the successful ticket—a total number of 143 votes being cast.

President—Joseph Breck.

Vice Presidents—E. S. Rand, Eben. Wight, J. F. C. Hyde, W. C. Strong.

Treasurer—William R. Austin.

Corresponding Secretary—Eben. Wight.

Recording Secretary—F. Lyman Winship.

Professor of Botany and Vegetable Physiology—Prof. Asa Gray.

Professor of Zoology—J. W. P. Jenks.

Professor of Horticultural Chemistry—E. N. Horsford.

LETTER FROM MR. BROWN.

An Old Town—Newspaper established—First Editorial—A Young Bride and a New Baby—Tyranny of Business—An Old Church, and an Old Swamp—Effects of Draining and Cultivation—Profits—Sheep on Old Pastures—Rural Residences near the Ocean—Good Examples—Sunday—and Consideration for Hoops.

Hingham, Mass., Oct., 1859.

GENTS.:—Many years ago, I was a citizen of this ancient and pleasant town,—and here, after a ramble through most of the States of the Union in order to see what lay outside of the pasture I had been feeding in, I embarked in business. That business was the establishment of the first newspaper of the place, in connection with a young chum as full of zeal as myself. Never to be forgotten by me, are some things that happened at this period. It was easy to set up a press and finger the types, but where were the editorials to come from? The village must have its newspaper—its advertisements, its political calls, and notices of various kinds, together with its marriages, deaths, poetry and stories. All these now stood in fair array before us, but there was no editorial. There was nothing to *write* about—nothing—the world was blank! "No man knows what he can do until he tries." This old saw haunted me continually, until in a fit of desperation the pen was seized, and the first editorial was born! Eureka!

Here, too, I brought my young bride, scarcely nineteen, and only a ninety-six pounder, but as full of energy as the largest girl that ever bewitched a boy on the South Shore. In the progress of events, it seemed sort of strange that there were *three* of us in the family; the house appeared odd; there was an air of importance about every body, and a sly winking that betokened something either good or bad! But when the outsiders told me such was the way of the world, I reconciled myself to it with the best grace I could, and concluded to let it wag on. But I could scarcely make up my mind which delighted me most,—the birth of the first editorial, or the birth of the first baby!

All my associations, business and social, with the good people of the town, were of the most pleasant character; acquaintances were rapidly formed, and mutual benefits, I trust, were received from contact and labor with each other. The newly-born paper flourished in its youth, and grew into a manly vigor, so that "news from all nations is lumbering at its back" at this day.

Business is a tyrant, gentlemen. It had cut us off,—by the word *us*, I mean, not the editorial plural, but the corporeal, flesh and blood, *us*, my good wife and myself,—business had cut us off from all association with our early and excellent friends, now, for some fifteen years, and that is a loss not to be balanced by gold. So we resisted the temptations of business, and came to this old town to see our old friends, when the sun was shining softly upon October leaves, and the earth seemed as lovely as on that delightful May morning, when I entered the town with a young lady at my side, under a Leghorn hat almost as capacious as the hoops of to-day.

This accounts for my dating at this place; and this essential preliminary being settled, I will leave personal reminiscences, and proceed to regale your readers, if I can, with some account of what I have seen and heard here.

HINGHAM lies on Boston harbor, about a dozen miles from the city by water, and a trifle more by land. The town nestles pleasantly among the graceful undulations that form the surface, having several streets lined with substantial dwellings, churches, stores and school-houses. The old church—the oldest in Massachusetts, I believe, if not in the country—stands upon a gentle eminence, still in good condition, and has had but five pastors in the space of *two hundred and twenty-four years!* The population of the town is mainly agricultural, though at a former period, a brisk and profitable business was done in the mackerel and cod fishery.

Unusual attention has been paid to the agricultural capacities and interests of the town within a few years, which has resulted in frequent gatherings of those interested in the subject, in the organization of a vigorous town society, and in the reclamation of new, and the better cultivation of old, lands. One of the finest examples I have ever seen of reclaiming a bog swamp, is on the farm of JEDEDIAH FARMER, Esq. I saw this swamp several years ago, when it was in reality a *dismal swamp*; it was low, wet, uneven, and covered with water brush, brakes, and uncounted numbers of wild rose bushes, that made it perilous to enter its repulsive borders. When these had been cut and cleared off, and the plow put in, the moss was ten inches deep, and would so rise up under that implement as to raise it two feet from the level. But the axe, hoe, plow and fire, reduced all obstacles, aided by the draining which preceded them, and now that home of frogs, muskrats and miasma, is a fertile

and smiling field, whereon corn and cabbages, beets, bagas, and potatoes and pumpkins, do most exceedingly abound. Three tons per acre of the best hay has been cut upon it, and the finest garden vegetables grow equally well. And yet, this land has lain there in gloomy repulsiveness for more than two hundred years, an eye-sore and nuisance, for the want of some one possessing faith and energy to take it in hand. When the present proprietor commenced upon it, he was told that "others had attempted to subdue it, but failed; that he might, possibly, make maples grow there, but *nothing else* would—they knew it." They ridiculed the effort, and sagely reminded him that "a fool and his money were usually soon parted." But, there stands the result, gentlemen; send all your doubters to see it. Each acre of it will yield more profit than two or three of the uplands which surround it, and it is well worth, to-day, $200,00 per acre for agricultural purposes. Being near the village, the land cost about $40 per acre, and it cost as much more to reclaim it. Now let us see how the account stands with it? It now yields, and with the aid of a little top-dressing will continue to yield for many years,

Three tons of hay per acre, at $18,00	$54,00
Fall feed, per acre	3,00
	$57,00
Interest on $80,00	$4,80
Fencing and taxing	5,00
Cost of making the hay	9,00—$18,80
Profit	$38,20

I only give the figures as an approximation of the true result, being aware that the land must be manured annually to keep up this degree of fertility. But thirty-eight dollars, or even twenty-five of it, is a pretty good income from an investment on $80,00, and would be thought so by most persons engaged in mercantile business.

SHEEP ON OLD PASTURES.

Some of the finest examples are afforded here, of the effects of feeding sheep upon pastures that have become exhausted of nutritious grasses, and grown up to bushes, briers, brakes and moss. I have seen pastures to-day that had become almost worthless, but now green and smiling as a lawn, with every inch among the rocks covered with the richest pasture grasses, and not a blackberry vine, wild rose bush, mullein, or other worthless plant in sight. The sward does not seem compact and bound, but loose and porous, and filled with the most healthy and vigorous roots. The sheep grazing upon these pastures, afford ample evidence of the richness and luxuriance of the grasses upon which they feed. These examples, with similar ones that I have observed in other places widely remote, would seem to shed light upon the perplexing question so often asked—"How shall I reclaim my old pasture?" All over New England there are thousands of acres producing little or nothing that might be renovated by the introduction of sheep upon them, while the profits from the sheep themselves, I believe, would be larger than from the same amount of money invested in cows. I have been told of an instance where a hundred acre pasture fed scantily only twelve sheep and six cows the first year, but on the second summer fed well twenty sheep and twelve cows, and continued to increase in fertility until more than double this number was well fed upon it!

Men of means, and full of love for agricultural improvement, have erected pleasant country seats in the neighborhood of the bay, or a little back among the hills, as fancy or convenience has suggested, giving striking examples of what an acre of land may be made to produce These examples are of much value to the common farmer, if he is but an observing one, as they suggest to him what he can himself accomplish on his own premises, if he will but contract his operations, cultivate less, and cultivate better, and by a more thorough preparation of the land by draining, subsoiling, manuring, and careful tending. In this good work I found valuable examples on the farms of the Hon. ALBERT FEARING, ALFRED HERSEY, Esq., JOHN R. BREWER, Esq., and that of THOMAS S. BOUVE, Esq. These gentlemen are all leading members of the town agricultural society, and mingle the influence of their personal example with that of well cultivated fields and abundant harvests. Some of them you know not only as merchants of unbending integrity and honor, but as men whose philanthropy is as universal as the want which calls it into being. They are public benefactors. Fine dwellings crown the hills that overlook the harbor, as well as the wide expanse of sea, strongly contrasting with the huge moss-covered rocks that everywhere line the coast, and lovingly look out from the dark cedars that are indigenous to the soil. The grounds around these dwellings are usually under a high state of cultivation, and many of the elegancies of rural life are introduced, such as flower-gardens, walks, avenues of trees, choice shrubbery and green-houses; and these form examples of taste which most common farmers may properly and profitably imitate in some degree. The whole country—naturally, rough and uninviting—is greatly improved by the introduction of these dwellings, and the true taste exercised in the laying out and managing their grounds. I can scarcely recall to mind any portion of our coast offering so many romantic and beautiful spots for summer residences, as on the graceful

hills overlooking the harbor and ocean in the immediate vicinity of this charming old town.

To show you that I observe my home habits when I am abroad, I will tell you that yesterday I attended a Sunday School in the old church, and then listened to an excellent sermon in the North Church, by the Rev. Mr. NOYES, upon the text—"*And he was transfigured.*" I could give you its outlines if I had room. As I am an observing man, and mean to "catch the manners living as they rise," I must note one thing especially comforting to ladies, even if it does show that I had my eyes open in church! I could not help noticing that the men, with their compact legs in their compact pantaloons, sat in the farther portion of the pews, and the women in the end next the aisle! But my letter is too long now, and I must subscribe myself,

Truly yours, SIMON BROWN.

MESSRS. NOURSE, EATON & TOLMAN.

For the New England Farmer.

REPORTS COMPARED.

MR. EDITOR:—On the table before me lay two Reports on Agriculture; the title of one is, Patent Office Report, 1858—Agriculture; the other, New York State Agricultural Report, by B. P. Johnson, Secretary. Just look at these two books, Mr. Editor; for you have them, and your very just and interesting review of the latter in the *Farmer*, a week or two since, proves that you have digested the contents of one of them, at least, and I have no doubt but what you found it very wholesome and agreeable food. The question, however, I wish to ask you is, Can you digest the former—have you a stomach capacious and powerful enough for that? I doubt it; but we shall see what we shall see. The one is all full, as an egg is, of nourishment of the most interesting and instructive matter, relating to the farm and its management, in door and out. It is a "complete guide to the carrying on of a farm," in all its departments, and that of the highest order. I have read it with all the interest of a "sensation novel," and the farmers of New York may well be proud in being the means of bringing out such an instructive book, and by this means showing the farmers of other States how they do their business at home.

But the other Report, book, what shall we say of this? I have read its first article, on Education, with some interest, because I have children to educate; but its exact bearing on the agricultural matters of the United States I do not precisely understand; that, I presume, is of no consequence, provided D. J. B. does. The last article, on Meteorology, by Prof. Henry, is well worthy of being digested; it is good, strong food on the subject of which it treats, though, probably, very few of the farmers in these United States are sufficiently interested in the subject to read his paper. Beside these, there is little in the volume of any interest to the general farming mind, in my estimation. D. J. B. seems to be the Alpha and Omega of the whole Report, and I am candid to say, after looking every article carefully over, and reading most of them with some care, the question presented itself to my mind, Does such a report as this, emanating from the government, pay—is it worth the cost? My answer is, No. Either give the farmers of this great and progressive country something better than this, or stop it altogether, and devote the money which these two hundred and fifty thousand books cost, to the purchase of the Dioscorea Batatas, and send each owner of a farm one, throughout the Union. NORFOLK.

King Oak Hill, Oct., 1859.

For the New England Farmer.

FACTS FOR THE SCIENTIFIC.

A neighbor of mine has sown the French turnip for several years, with marked success, for the last three years, from the same seed, and has raised a good crop each year. This year he sowed as usual on ground precisely like his former fields, and manured and tended in the same way, and not a turnip from his whole field! The plants came up and looked finely until July, when they all went—to seed. No root on any plant more than on mustard. A fine lot of good plump turnip seed is all he gets for his crop.

Is there a fixed time in which turnip seeds, kept well, will mature, so as to invariably go to seed as above, or is this a freak of nature? Will any one give us facts in reply?

I also will state a hydraulic fact or two, and ask for a scientific answer upon philosophic principles. As is often done, I have water running to my barn by syphon from a well 12 rods distant, and 18 feet deep. It invariably runs well from October to the next season of warm weather, when it as invariably lessens gradually and stops, and cannot be made to run again for more than a day or two, till cold weather sets in. No matter what the depth of water in the well, it *will not* run steady in hot weather. When the force pump is applied, the air or gas (which is it?) appears from the upper end, and all is right for a day or two, when it again diminishes till the stream stops entirely. As many others in this region are troubled in the same way, we are anxious to know the cause and the cure. Is it *gas* formed by chemical action of the water upon the lead in warm weather and not in cold, or is there some other cause? What is the remedy?

I also notice in the operation of all hydraulic rams, that at each motion of the spindle valve, the water in the driving pipe is suddenly checked in its downward motion, and is reversed and sent back *into the spring or fountain head.* Now in all the explanations I have ever read, I can find no mention made of the fact, and much less a reason given for it. In the *American Agriculturist* for December, 1858, and in several numbers of the *Farmer* during the past season, we have an explanation of the Hydraulic Ram, and its operation, but in none of them, nor in any school philosophy, can I find a mention of the fact, or a reason for it. By this I infer that the writers of the above newspaper articles were but superficial observers of the ram and its operations, as are too many of our writers for the various agricultural papers. What we want is plain common

sense explanations of facts, with the "whys and wherefores."

From ten years' experience with various kinds of hydraulic rams, in every variety of location, I am fully convinced that any arrangement, or want of arrangement, by which this reverse motion of the water in the driving pipe is wholly prevented, will wholly prevent the successful operation of the ram for any length of time. A practical prevention causes very imperfect operation. Hence, one great cause of failure in the scores of rams set by inexperienced workmen in every part of New England.

Hoping to hear from you or your scientific correspondents soon, I will anxiously watch your columns. P. J.

Vermont, Sept., 1859.

EXTRACTS AND REPLIES.

INFLUENCE OF THE GENTLER SEX.

In perusing the last number of the *Farmer*, which contains so much interesting information, I was ready to query why the value of this useful work should not be appreciated by every tiller of the soil in New England, at least? It has been my privilege to peruse its contents from its commencement, and it has often occurred to me, that a single number had, to me, been worth a year's subscription, and from present appearances I think it is increasing in interest.

I have again and again perused with deep interest an article in the last number by one of the gentler sex. I think it must commend itself to the admiration of all, as replete with sound sense, and is an honor both to herself and her sex. Let others do likewise. She says, "Farming is an occupation in which woman has a part to perform; then let her express her estimation, her interest in it, and she will help to lend an enthusiasm, a charm to agriculture, such as will interest and animate our young men; and she will prove her influence to be more potent than all the wise counsellors found among our grandfather and father farmers of old New England." What can be more truthful? I rejoice to see such noble contributions of the gentler sex to a paper that I already take so deep an interest in, fully believing that such contributions will have an influence on the circulation of the *Farmer*.

CONSTANT READER.

Vassalboro', Me., 1859.

REMARKS.—Such commendations as the above are not unfrequent in the letters we receive, and they serve to encourage us in our labors. But grateful as they are, they are not so encouraging as the fact to which our correspondent alludes, that women are becoming more and more interested in the business of the farm. There are many who are good horticulturists, as well as floriculturists, now, and some who manage whole farms with ability. The cold barrier of indifference is broken, and a new era in agriculture is dawning upon us.

—

TIME TO CUT FENCE POSTS.

I wish to thank "R. C. H." for his opinion in your paper of Oct. 8, in regard to an inquiry of mine, of Sept. 24th, about cutting fence posts. But first, I should thank you for the valuable space you give us in which to make inquiries.

Will "R. C. H." give us his reasons for "cutting them in the month of June, and setting while green?" I have always noticed that stakes, withs and fence poles, cut when full of sap, decayed sooner than those cut when there was the least sap in them. JOHN W. TOWNSEND.

North Lisbon, N. H., 1859.

—

A SUBSTITUTE FOR MILK FOR YOUNG PIGS AND CALVES.

A porridge made of Indian meal and hot water is an excellent substitute for milk for young pigs, when milk is scarce, or not to be easily obtained. It will well repay the trouble of making the porridge to witness the thrifty condition of the pigs, they doing equally as well upon it as upon milk, if not better. One pint of meal is sufficient for every gallon of water, sifting it in gradually, while the water is boiling. Or it may be made nearly as thick as pudding, thinning with water while hot. The same is also excellent for young calves, adding a little salt occasionally. This, although it has been well tested, has not become as extensively used as it is worthy to be, and I am not aware of its publication before.

Springfield, Mass., 1859. J. A. A.

—

SAW-DUST AS A FERTILIZER.

Can some of your numerous correspondents inform me through the *Farmer* of the comparative value of saw-dust as a fertilizer, and of the best manner of preparing and using the same?

J. BRAD. PHILBRICK.

South Deerfield, N. H., 1859.

REMARKS.—Saw dust, as a litter, and an absorbent, is excellent—whether it has fertilizing properties of its own that are valuable, we must leave to others to decide.

—

WITCH GRASS.

I noticed in one of your numbers that a gentleman wished to get the seed of dog grass or witch grass. I call it devil grass, as I know of no other seed or grass that's a greater thorn to the flesh. All he need do is to get a few roots and set them fifty feet apart, and I guarantee he will have his farm seeded as fast as he wants it.

M. ROBINSON.

Wareham, Mass., Oct., 1859.

—

CONTRARY COLTS.

What is the best method of preventing contrariness in colts that seem inclined that way? If the habit is once formed in a horse, young or old, can it be broken? If so, how? QUERO.

REMARKS.—A friend at our elbow, who knows every hair in a horse's hide, says, "Be gentle, be patient; use soft and persuasive language; make the animal understand, what you want to teach him by kind words and acts, and when he learns that, he will serve you cheerfully to the extent of his power. You must be in sympathy

with him, and he will soon appreciate, and reward it, by his obedience. It is hard to teach an old horse, as well as an old dog, new tricks; but if you can change a vicious habit, it will only be by kindness.

—

GOOD CROP OF ONIONS—HINT FOR A NEW LAW.

As you and your numerous subscribers are always glad to hear of a good crop, and how procured, I will state for mutual benefit, that Mr. K. DRAKE, one of my neighbors, raised on 7½ rods of land, 36½ bushels of silver skin onions, worth 80 cents on the ground; yielding him the neat little profit of $20. He used hog manure and ashes.

Will our Legislature pass a law this coming winter, making it a criminal offence for every robin detected in stealing our cherries, strawberries, currants, &c.?

We have a very stringent law for one race of *bipeds*, of tne *genus homo* species. Should a poor half-starved boy pick up an apple, or get a few cherries or currants to eat, they fine him $100, or send him to the Reform School,—the mean little rascal! But don't hurt the poor robins, they are of more consequence than those whom Christ called fit for Heaven. C. CLARK.

Stoughton, Oct. 10, 1859.

For the New England Farmer.

WHY DON'T MY ORCHARD PRODUCE BETTER?

The above inquiry is often made, and with some, at least, I apprehend, without much investigation to ascertain for themselves the cause, which, in most cases, to a close observer and a rational thinker, would be found so plain as to need no reply.

I will instance one case of a similar inquiry, out of many of a similar character, that might be added. A neighbor, pointing to his orchard, wished to know what I thought could be the reason that his trees, which used to bear so finely, and which were not old, had for several years become so barren? I asked him how long it had been mowed without manure? His reply was, sixteen or seventeen years. I asked him how long he thought his cornfield would produce under similar treatment? Well, he supposed it wouldn't do very well; but he didn't know but apple trees would bear without manure? Such are the limited views of some; but it is probable there are but few farmers, or fruit cultivators but that would reason very differently.

I visited another orchard in Nova Scotia of about two hundred trees; the ground was in a good state of cultivation, and the trees and fruit showed a very striking contrast to the one alluded to above, and the results much more satisfactory. The proprietor informed me that he sold his apples the preceding fall for $1200, and he thought his present crop would be five hundred barrels, worth two dollars per barrel, giving him $2200 for two years.

It is an old, and I think, true maxim, that what is worth doing is worth well doing; and as it has been proved beyond question, that no part of farming will reward the husbandman equal to fruit raising, it often looks strange to me that so large a majority of orchards should be left to take care of themselves, and then charged with blame for unfruitfulness, when it belongs to the owner. D. TABER.

Vassalboro', 1859.

REMARKS. — Thank you, friend TABER; we hope to hear from you often. These are the kind of facts to set people thinking, and acting too.

EXAMPLE IN A POPLAR TREE

OF WHAT NATURE WILL EFFECT WHEN ASSISTED BY ART.

On the 10th of August, 1842, the lightning struck our Lombardy Poplar tree, not far from the house, with a crash as though the house itself had fallen in ruins. This tree, at 18 feet from the ground, branches out into three principal leaders. The one which faces the west received the full force of the thunder storm, and it exhibited an excavation of 26 feet in length, and at one part of 22 inches in breadth. Independent of this sad stroke at the western side of the tree, its bole to the north was struck at the same time, and denuded of its bark to the extent of 6 feet by 14 inches. Some idea may be formed of the vast injury which this tree received when the reader learns that I picked up fragments of its wood full 50 yards from the spot where it stands.

After a close inspection of the lacerated parts I conjectured that there was still enough of solid wood remaining to resist the violence of the wintry wind. Having cut out all the shattered parts, I placed a series of thick slates on a solid bed of mortar, quite up to where the tree takes its three leaders: thus forming a hard and permanent covering of 18 feet in extent. At the edges of the slates we applied Roman cement nicely sloped off; so that the future wood and bark might have an easy passage over them, at each returning season, for increase of growth. Thus, all being rendered safe from wind and rain we ceased our work, and left the tree to Nature's healing care. She has not disappointed us. Yesterday I got up into the tree, and I inspected minutely the injured parts throughout their whole extent. Their condition was prosperous in every point of view. The new wood and bark have rolled over the slates to a close or joining within 11 inches, binding the slates down in an everlasting prison.

A Spanish proverb says: "Thou art welcome, evil, if thou comest alone." But, in this instance, our poor poplar could not have such a consolation; for another thunder-storm broke over it, and the lightning struck it on the northern side, riving off the bark for a space of 33 feet in length, and at places of 15 inches in width. Singular to tell, no apparent injury was inflicted on the wood itself. The bark alone had suffered, so that a new supply of slates and mortar was not required. This victim to the lightning's fearful rage is now in health and vigor, whilst its summer foliage is of as rich a hue as that of its surrounding neighbors. Should future tempests spare it, the tree will be quite right again in a few years more; and its bole will be as beautiful as I remember it in times long gone by. The day may come

when this Lombardy Poplar's history shall be forgotten. Then, should it be felled, to serve domestic purposes, woe to the carpenter's axe and saw! They will have hard work when they shall have penetrated into the interior of the tree.

From this brief account, the admirer of trees may learn that it may be in his power to do wonders with them in their hour of accident, provided that he goes the right way to work, and lets Dame Nature have her own wise course. A lofty and majestic tree is a jewel of inestimable beauty on a villa's lawn, and is worthy of the owner's utmost care.—*Charles Waterton, Walton Hall, in Horticulturist.*

INFLUENCE OF RURAL LIFE.

The following just and eloquent remarks we quote from the Address of Henry F. Durant, Esq., of Boston, delivered before the Norfolk County Agricultural Society, Sept. 29, 1859. Mr. D. said:

He did not come here to attempt any instruction in agriculture. But there was a common ground where we could all meet and learn something from each other. Other lessons might be learned in the green fields, than the best mode of raising crops. Education in the widest sense was the great end and mystery of life. We were here to unfold and educate ourselves—to find the development of heart as well as of brain, of the affections and the moral nature. In the country might such an education be the most usefully obtained.

He first spoke of the democratic aspect of rural life, of the happiness, the necessity, the dignity of labor, and its tendency to elevate the mind as well as to secure competence. Labor was the law of our being. Its results were fixed in the Almighty decrees. Sunrise and sunset, winter and summer, were not more sure than the results which waited upon the footsteps of strong endeavor. The law of "no work, no wages," should be to us a source of deepest gratitude. The New England farmer should be peculiarly grateful for the hard soil which he finds in this section of the land—calling forth those efforts which, under the guidance of Christianity, have elevated him high up in the lists of true manhood.

Rural life had its lessons for the heart and the affections. In the city, men hardly knew the names of their next door neighbors; in the country, though half a mile apart, men were neighbors. Country life taught men the value of sympathy and of society. It gave woman her true sphere, too, as no city homes ever gave.

The country refined and elevated. It taught us on every hand lessons of infinite good. Scenes of grace and beauty spread themselves abroad on every hand. In Rome stands a great obelisk, brought long centuries ago from Egypt—from the centre of mysterious ruins—and men travel thither from every land, and seek to read the story of the ancient days, and gather wisdom from the strange hieroglyphics inscribed upon the column. Yet all around us, we had greater mysteries than those of ancient hieroglyphics or Egyptian obelisks. Every blade of grass which raised itself in the breeze was a tower, built story on story, with its foundations deep in the earth, mocking with its elastic strength and beauty the poor imitations of man. It had its origin long before towers and obelisks sprang into being at the touch of man, and came down to us perpetuated, from year to year, fraught with wondrous memories and suggestions.

This was but one form of that strange mystery which enveloped us on every hand, which, for want of a better name, were called beauty. Its influence on man was boundless, and the son of labor, "Gerard Massey," in one of his songs, called "The People," sang of it in fitting strains. This wonderful book which we called nature, rural life, was a pleasant story which had no end, and on every page we found the word "Excelsior." Taught by the flowers which raised their beauties up from the cold ground, taught by the trees which lifted their arms heavenward, taught by the mountains whose lofty peaks seemed to unite earth with heaven, taught by the constellations which never ceased their progress through the grand and boundless realms of space, we should seek to make our lives like the star which waited never, but hastened on its appointed way to the zenith of eternity.

For the New England Farmer.

CHARITY FOR THE ROBIN.

Friend Brown:—In your issue of Sept. 3d, "Charity" has attempted to furnish facts gathered from the investigations of Prof. Jenks. He says that nine-tenths of the food of the robin found until the first of May, consisted of the larvæ of the *Bibio allissennis*, an insect, in the opinion of entomologists, capable of producing one million from each parent, each season.

Prof. Jenks demonstrates that the robin, during the months of March and April, sixty-one days, consumed from one hundred to two hundred of those terrible scourges to the tillers of the soil, daily, each bird destroying some six or eight thousands yearly. During those months, robins are very scarce, not many having returned from their southern quarters, averaging two, or, at the most, three pairs to a farm.

O, what incalculable benefit to the poor soil-tiller are four or six birds destroying some five or six hundred worms daily out of millions of millions! How soon they must all be destroyed, and then, cock robin must starve.

If the Professor's theory is correct, to annihilate the *Bibio*, robins must abound plentifully enough to out-number all other birds in existence. Why, sir, the number must be so vast, that ten months starvation must follow, for all the crops used by the human family would not suffice to sustain the robins needed for such a glorious worm-slaughter.

"Charity" would have us protect the highwayman, the banditti, the poacher, because they may have some redeeming qualities; generosity, even charity may be dispensed by them, when it comes cheap—stolen charity.

I wish to say a few words about the bird law. Common law gives a citizen self-protection in person and property from poachers. Massachusetts statute law says he shall be mulcted for every robin killed, or found dead on his premi-

ses; he is mulctable (if I may use the word,) for every robin's grave. The statutes ought to have provided a robin cemetery, then all will be saved from being dragged before some Justice Innocent.

Know Sir Walter Scott's idea on the law, and its process of being carried out. "If the citizen makes over to society the natural, indisputable and inalienable right of self-defence, society is bound to maintain its share of the contract in full and adequate protection, and the contract is violated unless it does so. When society fails to protect personal rights, it becomes, for the time being, and for the purposes of that act, resolved into its elements, and the power goes back by primary right to its constituents. No majority, however large, may place men under a sham government, and make them amenable to its penalties, while it refuses to protect them in those rights which they hold from a source higher than government. Still less can it assume to prevent them from redressing those wrongs which its authority sanctions or permits by its neglect."

Government binds the citizen to loyalty no farther than it is itself bound to justice. If government does not adequately protect, every man may take law into his own hands against poachers upon his labor, his own and his family's living, answerable only to his fellow-man. He only transfers his allegiance from a sham statute to common law. J. S. NEEDHAM.

South Danvers, Sept., 1859.

AUTUMN.

Leaf by leaf the roses fall,
Drop by drop the springs run dry;
One by one, beyond recall,
Summer beauties fade and die;
But the roses bloom again,
And the spring will gush anew,
In the pleasant April rain,
And the summer sun and dew.

So, in hours of deepest gloom,
When the springs of gladness fail,
And the roses in the bloom
Drop like maidens, wan and pale,
We shall find some hope that lies
Like a silent gem apart,
Hidden far from careless eyes,
In the garden of the heart.

Some sweet hope to gladness wed,
That will spring afresh and new,
When grief's winter shall have fled,
Giving place to rain and dew—
Some sweet hope that breathes of spring,
Through the weary, weary time,
Budding for its blossoming,
In the Spirit's glorious clime.

SAWYER'S IMPROVED CULTIVATOR.

During the past summer, we have used in our fields an implement with the above name, and have found it in reality, a labor-saving implement. It is our practice to hill potatoes at the first hoeing, all we intend to hill for the season, —because we have found each successive hilling to induce a new set of roots to start out higher up the stalk, and from these a new crop of potatoes. Under this practice, the forming of a large hill is a work of considerable labor, and the Improved Cultivator performs it quickly and admirably. It may be conveniently changed to throw up a little earth, or a good deal, by removing the side shares, or allowing them to remain on. Wherever it is wished to hill up plants, it is the best implement in our knowledge. It works clean, also, cutting up all the weeds in its path. We like it much. We do not know who sell or make it. They must speak for themselves.

For the New England Farmer.

FALL PLOWING, AND THE ADVANTAGES OF DEEP PLOWING.

It is always desirable to do as much of the farm-work in the fall, preparatory to spring operations, as possible. If the plowing for next year's crops can now be done, that will relieve the team from a heavy task in the spring, as well as give considerable more time in that hurrying season to devote to other needful work. The fore part of November is a favorable time for plowing, the land then being generally in fine condition to plow, the weather cool and bracing, the team hearty and vigorous for the work, and there is usually leisure to devote to it.

Sod land, well plowed in late autumn, will be mellower to cultivate and clear of grass and weeds, the next season, than if it were plowed in spring, —the frosts of winter killing the up-turned roots and disintegrating and crumbling the soil, so that in the spring it will readily yield a deep, mellow and clean seed-bed, fit for any kind of a field-crop. Not only will the land be clean of grass and weeds, but clean of grubs and cut-worms also. By plowing green-sward as late as November, the worms and their eggs are turned to the surface in a torpid state, their arrangements are reversed, and the frosts of winter immediately succeeding, they are cleared out of the land. I have found late fall plowing a perfect mode of ridding my land of these two varieties of worms.

November is a good time to plow stubble or old ground, that is to be sowed with grain and stocked to grass the next spring. If the land is in corn-stubble, it will be well first to put on a heavy harrow, and passing with it once in a place, astride of a row each time, loosen the hills and scatter the corn-stubs about, which will make the plowing easier and more effective, and the stubble being separated in loose pieces by the harrow, will more readily fall to the bottom of the furrow than if remaining in unbroken hills or clumps of roots and stems. Lying beneath the furrow through the winter, with the soil settled down upon them, the stubs are not liable to be pulled up to the surface when harrowing in the grain in the spring. I have practised the plowing of corn-stubble and potato-ground in the fall, for several years past, and like it well, on such of my land as is not subject to overflow by freshets from the river, or is not on so steep a declivity as to be liable to be washed by heavy rains in the winter or early spring. The land does not need plowing again in spring, but is ready to receive the

seed the very first day that the surface has become sufficiently dry to harrow well, which will usually be several days earlier than the land would do to plow, or could be got ready for seeding, if to be plowed. The grain and grass-seeds committed to the ground thus early, have the benefits of the early rains, and become well rooted before the hot and dry weather comes on.

In the older settled districts of New England, it is often the case that the land, by long and quite shallow cultivation, together with a system of close cropping, is now too compact and hard, and needs deeper plowing and more thorough pulverization than when it was new, and naturally more mellow and friable by the presence of vegetable substance in the soil. Then, again, the oft-repeated treading of the cattle, and pressure of the sole of the plow, in invariably shallow furrows, has, in all those lands of a close texture approaching to clay, with a strong and compact subsoil, created an artificial hardpan, quite too near the surface, which operates deleteriously upon the crops, both in a wet and a dry season: in the former, by preventing the superabundant moisture from readily sinking below and relieving the surface of wetness and cold; and in the latter, by preventing the roots of vegetation from striking deeply into the soil, away from the parching effects of the sun. The roots of our cultivated plants will adapt themselves to the peculiarities of the season, if permitted to do so; that is, in a dry season, they will strike deep into the soil for moisture and a grateful temperature, and in a wet season keep nearer the surface, especially if made dry and warm by deep tillage.

Where the land is of a close texture, with a strong compact subsoil, it is not unusual to find a better farm underneath, than that which has been worked so long and so shallow on top. By breaking through this artificial hardpan or crust, and bringing up a portion of the under soil to the light of day and the influence of manure, the crops are by that operation considerably increased, even though no more than the customary quantity of manure per acre is applied. And if high manuring is practiced in connection with the deeper cultivation, the crops will be very much increased over what could be realized from the old shallow plowing and artificial hardpan near the surface, accompanied by as high manuring. Then there is the difference, too, in the case of tilling the crops raised on deep, mellow land, as compared with those on hard, shallow plowed land.

If deep sod plowing is to be practiced, it is especially desirable to do it in the autumn, that the atmospheric influences may ameliorate and modify the upturned subsoil, preparatory to future cultivation. Plow the green-sward in November, say eight to nine or ten inches deep, according to the quality of the subsoil. In the spring spread a good coat of manure, which, if fine compost, can be sufficiently mingled with the soil and covered by the harrow and cultivator; or if coarse, can, by lightly cross-plowing, be turned under three to four or five inches deep, according to the depth of plowing in the fall. If the plowing was, say nine inches deep, there will be no difficulty in guaging a light plow, with a sharp share, and wheel on the beam, so as to cross-plow in the spring and cover the manure about four inches deep, without disturbing the sod underneath. Green manure, well covered that depth, will decompose readily, and be more active and effective on the succeeding corn or other hoed crop than if turned down under the sod.

A neighbor of mine spread his manure on grass-land, a year ago last spring, and turned it under the sod, about six inches deep, and planted the field with corn. Nearly half the crop was destroyed by grub worms; and the soil, being a close compact loam, the manure under the sod was too inactive, so that the corn which did survive was backward in maturing. Last fall he consulted with me as to what he had better do with a piece of green-sward adjoining and similar to his corn-field, and which he wished to plant the present season with corn, but the sod of which was infested with grubs, as any one could see by digging into it. I advised him to plow it in November, turning the sod over from nine to ten inches deep. He did so; and in the spring harrowed the ground lightly first, to level the furrows and make cross-plowing convenient, then spread the manure on the furrows, and cross-plowed, turning the manure under four to five inches deep, harrowed lightly, marked the field off in hills each way, dropped a spoonful of superphosphate in each hill, and planted it with corn. No traces of worms have been discovered in the field this year, and although the season has not been favorable for the corn crop, he has considerably more corn to the acre than last year —probably twice as much. The land has also been very mellow, and free from grass and weeds, and easier to till, every way, than the piece last year that was plowed six inches deep. The subsoil here was a close, light-colored loam, of a clay nature, and by spring had changed to a darker color, by several shades, than when first turned up in the fall. The field will doubtless show the good effects of deep plowing for several years to come, especially while in grass again, lasting considerably longer in productive mowing than if the plowing had been not more than five or six inches deep. The grass-roots, having a deeper range, will not so soon become webbed and tangled together, and the sod "bound out," as it is termed.

A friend of mine, who, a few years since, purchased a tract of old worn-out plain land, is having remarkable success in rejuvenating the land by deep plowing, accompanied by high manuring. The land had, for many years, been under the wasting effects of shallow plowing and severe cropping with rye, until at length it was quite exhausted, and abandoned to pasturage, yielding a scanty herbage in the early part of the season, but becoming dry and sere by midsummer, and remaining so through the remainder of the year. My friend found that the surface soil was of little or no account any way, but thought there might be some hopes of making productive land of the subsoil. He accordingly commenced upon a piece of the tract, of about five acres, by at once putting in his universal sod and subsoil plow ten inches deep, in the month of November, and turned up a subsoil of yellow loam, fine-grained and free from stone, and that had never before seen the day. In the spring following the plowed land was manured broadcast, at the rate of about twelve cords per acre,

and cross-plowed with a sharp steel plow, turning the manure under four to five inches deep. The field was then harrowed, furrowed out in rows each way, a table-spoonful of superphosphate put in each hill, and the piece planted with corn. It yielded about seventy bushels of shelled corn per acre, and the next year a good crop of oats, and is now well set in grass, for a mowing-field. Other portions of the condemned old plain are now undergoing a similar process of deep plowing and high culture, with good results; and this desert will doubtless soon blossom as the rose.

Where land is of a loose, sandy or gravelly nature, with a feeble subsoil, and has never been plowed deeply, it will not be advisable to plow so deep at once as nine or ten inches, unless there is a large amount of manure applied. But even such soils may be gradually deepened, without the necessity of extra large dressing of manure, by bringing up an inch or two of the subsoil at each rotation of crops; and thus, in time, a good depth of active soil may be obtained. The best general rule, however, in farming, is deep plowing and high manuring.

F. HOLBROOK.

Brattleboro', Oct. 26, 1859.

MAKE FARM LABOR FASHIONABLE.

At the base of the prosperity of any people lies this great principle—*make farm labor fashionable at home.* Educate, instruct, encourage; and offer all the incentives you can offer, to give interest and dignity to labor *at home.* Enlist the heart and the intellect of the family in the support of a domestic system that will make labor attractive at the homestead. By means of the powerful influences of early home education, endeavor to invest practical labor with an interest that will cheer the heart of each member of the family, and thereby you will give to your household the grace, peace, refinement and attraction which God designed a *home* should possess.

The truth is, we must *talk* more, *think* more, *work* more, and *act* more, in reference to questions relating to *home.*

The training and improvement of the physical, intellectual, social and moral powers and sentiments of the youth of our country, require something more than the school-house, academy, college and university. The young mind should receive judicious training in the field, in the garden, in the barn, in the workshop, in the parlor, in the kitchen—in a word, around the hearthstone at *home.*

Whatever intellectual attainments your son may have acquired, he is unfit to go forth into society if he has not had thrown around him the genial and purifying influences of parents, sisters, brothers, and the *man-saving* influence of the family government. The nation must look for virtue, wisdom and strength, to the education that controls and shapes the *home policy* of the family circle. There can be no love of country where there is no love of home. Patriotism, true and genuine, the only kind worthy of the name, derives its mighty strength from fountains that gush out around the hearthstone; and those who forget to cherish the household interests, will soon learn to look with indifference upon the interests of their common country.

We must cultivate roots—not the tops. We must make the *family government*, the school, the farm, the church, the shop, the agricultural fairs, the laboratories of our future greatness. We must educate our sons to be farmers, artizans, architects, engineers, geologists, botanists, chemists—in a word, practical men. Their eyes must be turned from Washington to their states, counties, townships, districts, *homes.* This is true patriotism; and the only patriotism that will perpetually preserve the nation.—*Gov. Wright.*

For the New England Farmer.

FARMING IN NORTHERN NEW HAMPSHIRE.

MR. EDITOR:— Farm-house architecture was mentioned in my last. The interior of our dwelling is somewhat deficient. First—a small apartment often serves as wash, cook, eating, library and living room. Here are assembled a steaming wash-tub, seething cook-stove, cupboard, tables, chairs, sink and wood box. Various articles of clothing, files of newspapers, almanacs and shelves of books, are hanging on the wall—dried apple and pumpkin depending from the ceiling. Here the family take their meals and pass their leisure time.

Second—the larger and more pleasant portion of the dwelling is divided into two or three well papered, painted, carpeted and curtained rooms. Here are costly mirrors, paintings, tables, chairs, gifts, gilt-covered books, artificial flowers, an ornamented stove, polished shovel and tongs and the family ambrotypes. But, alas, these rooms are Holy of Holies, to the family. The mother alone, as high priest, enters there semi-annually to overturn and then re-adjust their contents.

Now here are two great evils—first, confining the family to so small an apartment, and allowing papers, books and clothing to become injured by steam and smoke; second, expending so much time, labor and money in furnishing those spacious but useless apartments—the parlors.

The remedy is simple and inexpensive. Convert the most spacious of these rooms into a well lighted, ventilated and warmed living apartment—render it free from vapor and smoke, and exchange that costly but useless furniture for a globe, maps, a variety of engravings, scientific and other works. Have these tastefully and conveniently arranged.

Such a reformation in our dwellings would be of incalculable value. If farmer's workmen and sons could assemble in such a room after the day's labor; there would be less murmuring—thought would be awakened, and youth be protected from the fatal allurements of idleness.

Who shall begin this reformation? None so competent as the *wives* of farmers. If parents desire honorable men and noble women for sons and daughters, they must remember that youth must have an acquaintance with facts—with the true, beautiful and useful things of nature. Then make home attractive, and let that attraction consist of something profitable.

This is a practical question. Fashion is the great obstacle. All are pecuniarily able to have

such an apartment, if they have parlors. Now shall an injurious, inconvenient and expensive habit be cultivated, because, forsooth, we must imitate our wealty city friends? Shall we expend time, labor and money for that which can be of no possible benefit to any one? Let those who think farming unprofitable and unpleasant, consider this question. W. C.

Bath, N. H., Oct. 24, 1859.

REMARKS.—Excellent—these are the phases of rural life that need especial attention.

For the New England Farmer.

IS THE STOMACH MERELY A CONDENSER?

Agricultural chemists—perhaps the majority of them—inform us that vegetable or animal food passed through the stomach and body of an animal, receives no element which makes it more valuable as a manure than it was before. One hundred pounds of hay passed through the body of an animal, will give about forty of manure—the sixty pounds loss being carbon and water expired as carbonic acid gas, of little value—in so great a proportion, as is stated—in the manure heap. In other words, that the hay is simply reduced, having neither lost nor gained anything of much value as a manurial agent. And so with all other kinds of food; as is the character of the latter, so is the manure.

The late Prof. J. W. F. Johnston entertains the same opinion in his "Elements of Agricultural Chemistry and Geology." He says: "The vegetable food, by respiration, is freed from a large portion of its carbon, which is discharged into the air, while nearly the whole of the nitrogen remains behind. In the food consumed, the carbon was to the nitrogen as nine to one; in that which remains in the body after respiration has done its work, the carbon is to the nitrogen in the proportion of only two to one." Mr. Johnston observes, that *weight for weight*, the manure of an animal must, in all its important forces, be richer than the vegetable food consumed; but he does not admit that it contains anything more, but rather less, besides the loss of carbon, which he regards as an unimportant ingredient.

In the last February number of the *Genesee Farmer*, the able editor asserts the same doctrine in a still more unequivocal manner. "It cannot be too often repeated," he observes, "that the value of the manure depends primarily on the composition of the food eaten by the animals. 'You cannot make a whistle out of a pig's tail,' neither can you make a good manure out of an old straw stack. You may rot it down, or feed it to animals; but it is straw still." * * * * "Unless the substances from which the manures are derived contain the necessary elements, it is in vain to expect to make a valuable manure from them by any known process of feeding or fermentation."

In an article entitled "Barn-yard Manure," in the "Annals of Science," by Hamilton L. Smith, it is stated: "There are no fertilizing properties gained by passing food through the body of an animal, and there may be nothing of material consequence lost."

All this authority would seem to shake, if not entirely dissipate, the common belief, that vegetable food receives important fertilizing matter from the perpetual waste of the animal system, or that it is transformed into such by the influence of respiration and the mysterious process of digestion. If non-nitrogenous or even azotized food, however, takes from the system more than it gives, the animal in time must grow poor upon it, unless it has other resources of nutrition—from the air it breathes and the water it drinks, or unless the stomach has the power of chemically changing the food, or of creating new substances—which may find more belief. If heavy drafts are made upon the food alone to build up or sustain the animal system, enough for the formation of muscle or of fat, then the food must lose important substances in its passage, and would suggest to the reflecting agricultural economist, whether there is not some better method of manufacturing manure than the feeding of animals. In respect to growing animals, Prof. Johnston acknowledges their manure is not so rich as those which are fattening; but he seems to admit no important loss in that of the latter, as nothing is taken but starch and sugar.

But, per contra, I pass to what another writer says. In the last volume of the "Massachusetts Society for Promoting Agriculture," there appears a Prize Essay on manures, by Joseph Reynolds, M. D., who seems to entertain the more common belief that there is an important, nitrogenous and saline accretion in vegetable matter in its transit through the animal. In this particular, he seems to ignore the doctrine of those quoted above, though he does not directly combat it. The essay is clearly, logically and forcibly written, generally, without extra verbiage or abstruse technical terms; and appears to me well worthy the award it received. In the extract made, I have taken the liberty to italicize a few words or phrases, for an obvious reason. Dr. Reynolds observes:

"Vegetable substances are also decomposed in the digestive organs of animals, by a process, in many respects, similar to that which we have already described. The vegetable fibre is communicated by the teeth, and softened and permeated by the fluids contained in the organs of the animal. A large portion of the starch, gum, sugar, gluten and salts, are dissolved out and taken up by the lacteal vessels of the animal, to serve the purposes of nutrition. The remainder, mixed, as we have said, with the *juices of the animal*, containing in solution various substances, is ejected. This process is accomplished much more rapidly than the ordinary process of vegetable decay, and the substance resulting is mixed with *a large amount of animal matter*, which fits it for rapid putrefaction. The animal matter acts the part of a leaven, which sets up the putrefacting process, wherever the necessary conditions are present. There is this difference between the reduction of vegetables by the ordinary process of composting, and by the process of animal digestion, viz: that in the latter process, vegetables are made to afford nutriment to animals while undergoing reduction, and yet in consequence of the condition to which they are brought, and of

the *additions which they receive*, they are more valuable as manures, than when, without serving the purposes of nutrition, they are reduced by the former process. These two processes, vegetable composting, and the feeding of animals with vegetables, are the sources from which carbonaceous manures are chiefly obtained."

Digestion is a vital process and seems to possess the power of changing the nature of food submitted to it; of causing re-formation; and, perhaps by the aid of respiration, (drawing in the gases of the atmosphere,) of generating or accumulating nitrogenous substances. Whether a man or brute live on vegetable or animal food, his body is the same. The flesh and bones of the lion and the lamb are alike. The processes which go on in the stomach are not well understood, and probably never will be. That the latter is not a machine which compounds or mixes up its food, but a receptacle having peculiar and mysterious functions, seems to be admitted. The celebrated John Hunter once laconically observed to his students: "Some physiologists will have it, that the stomach is a mill; others, that it is a fermenting vat; others again, that it is a stewpan; but in my view of the matter, gentlemen, it is neither a mill, a fermenting vat, nor a stewpan; but—a stomach, gentlemen, a stomach."

At present, it is confessed, physiology and chemistry are unable satisfactorily to explain the animal economy. Liebig's beautiful theory of nutrition is said to be rapidly losing its hold upon the scientific mind, and confusion and mystery still reign. The blood is supposed to be the nutritive vehicle in animals; yet substances are found in the tissues and bones which cannot be discovered in the blood—nor in the food, in sufficient quantities. Neither is the blood the same in any two individuals, and is perpetually varying in the same. Phosphate of lime is found in the whole organism of man; yet it is said none has ever been found in the blood. Azotized food has been regarded as the most nutritious; yet a writer in *Blackwood's Magazine* says that "water is as nutritious as roast beef." It may perhaps be well supposed, that the water which animals drink—charged with various salts, in connection with the influence of the atmosphere—would greatly modify the food in the stomach, and enrich that which is passed off as manure.

Prof. Johnston states that thirty-six pounds of sheep manure are worth one hundred and twenty-five of cow. In feeding one hundred pounds of English hay to a cow, and the same to a sheep, in which do we get the greater value as manure? Or is the product from either more valuable than the hay would have been—aside from its reduction—or does it contain more nitrogen and other manurial ingredients?

I would not pretend to answer these questions; and although I believe rich food will produce rich manure, I am in doubt whether poor food may not give a manure of higher relative value than the substance consumed. D. W. L.

West Medford, Oct. 13, 1859.

VEGETABLE LEATHER.—Messrs. Spill & Co., the well known army contractors, are issuing from their works at Stepney, portions, as samples, of a novel material, intended to take the place of leather. It is a very economical fabric, or rather series of fabrics, cemented together with caoutchoue, wholly inodorous, and of amazing strength and tenacity. It assumes a polish like leather, is marked in some instances, like morocco, bears a beautiful enamel, is susceptible of the most delicate embossing, resists the stains to which leather is subject, damp does not affect it, and the application of a sponge removes all dirt and restores it at once to its pristine character. It is being already applied to countless purposes, and may be ranked amongst the most valuable of the boons which the discovery of caoutchouc has conferred upon civilized humanity.—*Globe.*

For the New England Farmer.

COAL ASHES AS A FERTILIZER.

FRIEND BROWN:—Your paper is taken at our office by A. H. Grosvenor, for the general instruction in agricultural gardening, &c., at our section of the Shaker Village at Harvard. Among the farmers' reading matter it contains, I have been pleased to observe an occasional article upon the general uses of coal ashes as a fertilizer.

In your last issue, the editor of the *Commercial Bulletin* has presented to the public a good article on this subject, but in perusing it, I was led to suppose that many disposed to be skeptical on this subject would argue that the editor's test of anthracite coal was not a clear one, because he incorporated with said ashes equal parts of horse manure and loam in one general heap, as an auxiliary to his pleasant half acre.

Such skeptical friends would be apt to contend that the horse manure and loam did all the work, while the ashes, like the white soft-handed gentleman farmer that simply rides through his plantation, received the honor, and made all the noise. But as we too think different, please allow us to state our reasons for endorsing his opinion.

We consume at our large dwelling-house a number of tons of coal each winter, and having added portions of it to our composts, with little calculation or observation, we determined to test it singly this past season, and closely observe its effects. On an old mowing field too much run down, we top-dressed a square piece of ground fairly with clear coal ashes early in the spring. While the crop was growing, at all stages the difference was perceptible. When ready for the scythe, it was more in quantity; and as to quality, it produced about equal parts of herds grass and red clover. If the clover was not introduced by the agency of the ashes, we know not how it was introduced, for four years none was seen there before, or in any other part of the field. and this was the only clover seen in said field the past season. Both grass and clover was more vigorous, green and lively within the top-dressed square, and just as visible all around was the exhausted crop, which said as audibly as grass could say, in its declining state, that it had received no such assistance from this individual fertilizer.

On a hill-side not at all renowned for its wealthy properties in soil, we planted the Davis Seedlings and Jenny Lind potatoes in clear coal ashes, half a shovel full in a hill. Below, on equally

as good ground, we planted the same kinds of potatoes in compost manure, and the coal ashes, single handed, turned out the largest, best, fairest and most numerous quantity of potatoes. In reality, they were the best we raised on the farm. Almost side by side, in compost manure, our potatoes were somewhat infected with rot; in the ashes they were all healthy and sound almost to a potato.

In kindling fires, it is true, we use shavings and a little light wood, but the quantity I consider almost too insignificant to take into the account.

These experiments convince us that as a fertilizer, anthracite coal ashes possess the life and energy to produce the above effects on common crops. Hence, whatever theoretical lecturers or writers may present to undervalue the better qualities of the article, while it continues to improve quantities and qualities of grass, and give us sounder and larger crops of potatoes, we conclude to give it an honorable standing among the general agents which have long held undisputed station in the farmers' compost.

South Groton, Oct., 1859. WM. LEONARD.

WINTER BARLEY.

Winter barley is a variety of grain that has only been tried in this State for a few years, and has not yet got largely into cultivation. Wherever it has been given a fair chance, it has done well, as we know by the crops which we have seen. In a letter to the Branch County *Republican*, Mr. James Clisbee, a well known and prominent farmer, thus writes of winter barley:

"The winter barley has been grown in this vicinity for the last three years, and is, consequently, no longer an experiment. With us it has done well in every instance where it has had any chance. The general yield is from 20 to 24 bushels to the acre. Judging from what we have seen of the grain, it is capable of yielding 80 bushels per acre. During the past season, it has been raised by the side of spring barley, and has produced four bushels to one of the spring variety. Mr. Amos Culver, of this place, (Quincy,) has raised during the past season 60 bushels per acre on oat stubble once plowed, or 180 bushels on three acres, and on land that has been cropped for eight years in succession.

We think it has decided advantages over spring barley, viz:

1. It may be sown after farmers get through with their hurry in sowing winter wheat.
2. It may be harvested before wheat is ripe.
3. It has no black, or false heads.
4. It yields two to one, at least.
5. The insect will not hurt it in the fall, and it is so early that the weevil will not hurt it.

We are in hopes this barley will prove a substitute for the wheat crop, if we should be obliged to give up the cultivation of that grain in consequence of the insects and weevil, which at present threaten its destruction in Michigan.

This variety of barley should be sown sometime between the 15th of September and the 1st of November, requiring about two bushels of seed per acre. It will ripen ten days earlier than wheat, and leaves the ground in good condition for that grain.—*Michigan Farmer.*

For the New England Farmer.

THE HYDRAULIC RAM.

MR. BROWN:—Some months ago I sent you an article upon the hyraulic ram. One of your readers reminds me that something more was promised.

Perhaps I had better, at once, give you my experience. In the spring of 1858, I bought a hydraulic ram, and about one thousand feet of half-inch lead pipe. At the time, the pipe was in the ground, and the ram in the mud. It had been set up where the fall was wholly insufficient, and had proved of little value.

I placed the ram near a little pond in my nursery, from which there is a fall of four feet.

The driving pipe is stout inch and a half size, and sixteen feet long. The service pipe is half inch size—weighs twelve ounces to the foot. This is laid along in the brook, from the dam to the Assabet River; then on the bed of the river to the opposite shore. I there dug a trench two and a half feet deep, to the barn and houses, where the water is carried. It was an interesting moment, I will confess, when I watched at last for the water at the end of the pipe a fifth of a mile from the ram, that, it was hoped, might force it there. I was engaged in this work of getting the ram in operation while the country was on tiptoe about the Atlantic cable. I had dragged my *cable* through a body of water (!) and felt, like Mr. Cyrus W. Field, some anxiety. The water came! It was, "All right—De Sauty!"

This advantage about the ram was soon manifest. Wherever I wanted the water, there I could have it. I was bound to no "level of the spring." I arranged to have an outlet in the barn-yard for the cows to drink as they came in at night; —one in front of the cattle in the barn, where are watered twenty-five head with pails, during the winter; and one in front of the horses.

I also laid a side pipe into a rented house, which supplied two tenants, who had previously pulled up all their water with an "old oaken bucket," without ever discovering the poetry about the thing either!

Then I attached another branch pipe which carries the stream into my own dwelling-house, where it keeps two barrels full in a closet adjoining the chambers. Although I have two good pumps at the sinks in the kitchens, it is less work to draw down the water from the barrels when a large quantity is required, as on wash-days.

I consider these barrels of water, with pails near, a great safeguard against fire.

Then, having the water in every place where it could be of use, I attached another pipe to the "main," which, with a suitable nozzle, afforded me a pretty fountain. To be sure, it was not much like the Croton, or Cochituate fountains, but *I* liked it far better. It was in *my door-yard!* The site of the fountain is about fifteen feet above the ram. The jet is thrown fifteen feet high.

Not long after I got the machine in operation, leaves and dirt got in and stopped its working. This annoyance I easily remedied by making the little enclosure at the dam, double, and packing the space between the double boarding, with sawdust; so that the water was strained before entering the driving pipe. I found out, too, that it was not well to have a small strainer immedi-

ately over the end of the pipe. It lessened the force of the water, which should fall into the driving pipe without the slightest hindrance.

I suppose some will like to know how I kept the ram from freezing. It works well under water, and I had only to settle it down until the moving part was covered. Great care must be taken that the ram be so boxed around that the dirt will not wash over it.

Your readers may remember that while the ground was almost bare, last January, we had a very cold time. My pipe froze up that supplied the barn. I dug down to it and found the ground, to my surprise, stiff with frost, below the pipe. The two and a half feet was not deep enough to bury it. It was with great regret that we were obliged to get along at the barn for weeks till milder weather, without this convenient stream of water. It was at once double the work to turn out the Brighton cattle, water them at the pump, and get them back to their places again, than what it had been to just set down before them some two to four buckets of water in the barn.

And, besides, I noticed that the change was not beneficial to the cattle. In the barn I had watered all twice a day, the cows three times. The store cattle now were "turned out" but once, and if they felt like capering or fighting, or, if the day were windy and cold, they went without water the whole day. When water was given them in the barn they ate more, and as the hay was of that quality that the more consumed the better, that was a gain.

On the whole the ram has already been of great value, and promises to continue to save much labor. I would not part with it for five times its cost, and can most sincerely recommend it to all who wish a cheap and abundant supply of water, and are in the vicinity of a fall.

I have connected with my "water works" a variety of contrivances to enable me to control the stream and direct it where desired. These consist of waste stop cocks, hose, couplings, &c., which are readily obtained at the Boston plumbers.

I shall be very happy to show any of your readers what I have, I fear, very imperfectly described, if they will favor me with a call.

Your friend, WM. D. BROWN.

Concord, Mass., Oct., 1859.

For the New England Farmer.

ORDER AND ECONOMY ON THE FARM.

MESSRS. EDITORS:—I was glad to see the remarks of your correspondent, "W. C.," in your last issue, and I wish he had pursued the subject still further, and said something of idleness and economy on the farm. Where you see buildings in the plight spoken of by W. C., it may be inferred that the occupant is lazy, and not a "church-goer." Whenever you see a neat and well-filled wood-shed, the owner is, generally speaking, a patron of churches and schools. It is lamentable to see how few farmers are sufficiently careful to lay in a good supply of wood, that it may be at hand, dry, for use, while too many either burn their wood green or half rotten. A small wood-lot will afford an ample supply for a fire, without injury to the growth, if properly attended, in clearing the broken off branches, and decaying trees. How much waste wood could be gathered about a farm and saved from becoming rotten, by giving a little care to the subject? Waste land, also, could be reclaimed, and if too stony for cultivation, made to bear a fine growth of oak, by giving a little care to collect and plant acorns.

Our friends in New Hampshire are improving in the science of farming, and are becoming more liberal in the general improvement of the land. Instead of skimming their farms, and looking for that which will supply their daily wants by selling all they can, they strive to enrich the ground, and many obtain four-fold more from farms, than was gathered ten or twenty years ago from the same. Less land is cultivated than there was twenty years since. Such is the fact, generally I think, throughout New England.

The tendency is to expensive buildings on a farm, and farmers, as well as mechanics, traders, and professional men, are not careful to live within their own means. A farmer is the last person who should buy more than he has the means to pay for. J. D.

Boston, Oct. 22, 1859.

BIENNIALS AND PERENNIALS.

The following will answer several inquiries about the nature of biennials and perennials:

Biennials, speaking in a general sense, are sown one summer, and bloom and die the next, as soon as they have ripened their seeds. Most of them are hardy enough to stand our winters, for one summer is not long enough to complete their growth, even with the help of the hot-house, green-house or frame. Many stocks are biennial; the Canterbury bell is a biennial, and if sown about June, and planted out when large enough, will flower about the same time next year.

Perennials are plants which do not die at any given period, but would live on like an oak or vine, if the necessary conditions could be supplied, and the great family of plants comprises most of this kind.

Hardy perennials will grow many years in the same spot, and spread into large masses. Bulbs increase in number. Fibrous and tuberous rooted subjects spread out into many plants all round, and only want to be separated from the parent. Many of them separate themselves, and when they degenerate, it is from remaining too long in the same spot of soil, which they in time exhaust.

Stove perennials, cultivated in pots, are from time to time shifted from one sized pot to another, and new soil is filled up round the old ball of earth, and the plant continues to grow so long as this can be done.—*Artisan.*

TO MAKE PURE WINE OF APPLES.—Take pure cider made from sound ripe apples as it runs from the press; put sixty pounds of common brown sugar into fifteen gallons of the cider, and let it dissolve; then put the mixture into a clean barrel, and fill the barrel up to within two gallons of being full with clean cider; put the cask in a cool place, leaving the bung out three or four weeks.

HOW TO FATTEN CHICKENS.

We make the following extracts from an article on this subject in the London *Cottage Gardener*, and commend them to our readers:

"It is hopeless to attempt to fatten them while they are at liberty. They must be put in a proper coop; and this, like most other poultry appurtenances, need not be expensive. To fatten twelve fowls, a coop may be three feet long, eighteen inches high, and eighteen inches deep, made entirely of bars. No part of it solid—neither top, sides, nor bottom. Discretion must be used according to the sizes of the chickens put up. They do not want room; indeed, the closer they are, the better,—provided they can all stand up at the same time. Care must be taken to put up such as have been accustomed to be together, or they may fight. If one is quarrelsome, it is better to remove it at once; as, like other bad examples, it soon finds imitators. A diseased chicken should not be put up.

"The food should be ground oats; and may either be put in a trough, or on a flat board running along the front of the coop. It may be mixed with water or milk; the latter is better. It should be well slaked, forming a pulp as loose as can be, provided it does not run off the board. They must be well fed three or four times per day—the first time as soon after day-break as may be possible or convenient, and then at intervals of four hours. Each meal should be as much and more than they can eat up clean. When they have done feeding, the board should be wiped, and some gravel may be spread. It causes them to feed and thrive.

"After a fortnight of this treatment you will have good fat fowls. If, however, there are but four or six to be fatted, they must not have as much room as though there were twelve. Nothing is easier than to allot them the proper space; as it is only necessary to have two or three pieces of wood to pass between the bars and form a partition. This may also serve when fowls are put up at different degrees of fatness. This requires attention, or fowls will not keep fat and healthy. As soon as the fowl is sufficiently fatted it must be killed; otherwise it will still get fat, but it will lose flesh. If fowls are intended for the market, of course they are, or may be, all fatted at once; but if for home consumption, it is better to put them up at such intervals as will suit the time when they will be required for the table. When the time arrives for killing, whether they are meant for market or otherwise, they should be fasted, without food or water, for fifteen hours. This enables them to be kept for some time after being killed, even in hot weather."

A NEW FRENCH WHEELBARROW.—The new wheelbarrow, which is worked by the men employed to repair the damages occasioned by the *fetes* in the gardens of the Tuilleries, is attracting much attention. The novelty of the machine consists in two legs of the barrow being replaced by two wheels, smaller than the one in front, which are fixed immediately under the body of the barrow. The handles are raised so as to be on a level with the hands of the workman; and thus, upon a level road, a slight push is all that is necessary for the transport of the heaviest load. The three wheels being almost close together, the act of turning the barrow in the smallest space becomes as easy as possible. The workman has but to lean on one of the handles, and the front wheel is lifted from the ground leaving the barrow free to be manœuvred like a common hand-cart.

For the New England Farmer.

DISEASED APPLE TREES.

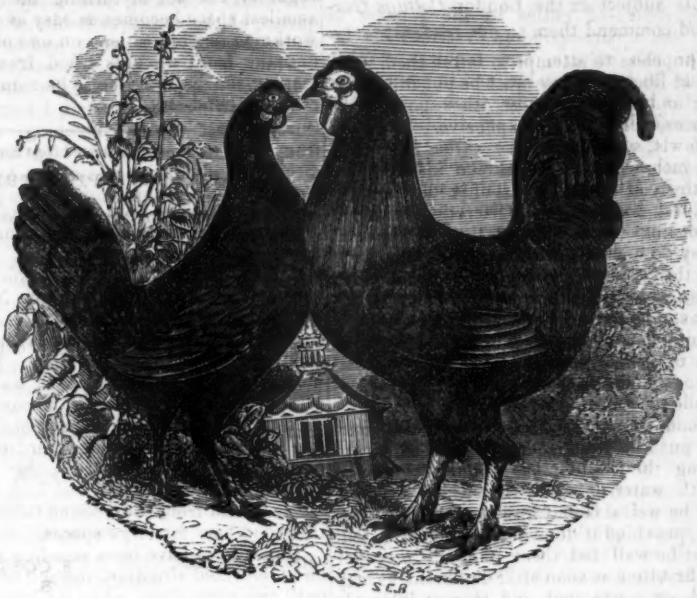
MR. EDITOR:—I am desirous of ascertaining from yourself, or some of your numerous subscribers, what ails my apple trees. I noticed last season on several of my trees, which are young, thrifty Baldwins, Hubbardston Nonsuch, &c., that the bark on the south side from the lower limbs to the roots had a black appearance, as though a fire had scorched them. I did not pay much attention to it then, as it was late in the season when I made the discovery, but the present season the same appearance has extended itself to quite a number of other trees, invariably on the south side of the trees, the bark turning black and assuming a charred look, and becoming loosened from the tree and falling off, leaving the wood bare for large spaces.

These trees have been standing in grass land, on an elevated situation, the soil of a clay loam, until two years since, when the ground was broke up and cultivated with potatoes, and manured from the barn-yard, for the benefit of the trees. In removing the bark from one of the trees with the point of a knife, something having the appearance of a white worm or grub, apparently about one inch long, fell to the ground, but could not be found afterwards. Is it probable, that so extensive and destructive an effect could have been produced by the operation of any kind of grub, worm, or borer? I greatly fear, that unless the cause can be discovered, and an effectual remedy applied, I shall lose my trees, which have cost me much time and care, and be disappointed in my long-cherished anticipations of having a good bearing orchard of choice fruit. Any information calculated to throw light on the subject, will be read with much interest by at least one subscriber to the monthly *New England Farmer*.

Still River, Oct. 21, 1859.

REMARKS.—We have seen no trees in the condition of those described, and cannot with any feeling of certainty tell either cause or remedy. We do not, however, think the injury is occasioned by an insect—it must be climatic. We have several hundred apple trees, but they have no "ails" such as you describe. We hope orchardists will be able to throw light upon the subject.

THERE are four millions of people in France who eat no bread. Some eat chestnuts, and some other kinds of vegetables. The people of Ireland, for a long time, subsisted mainly on potatoes. These facts prove not only that there are large numbers in civilized countries who do not raise their own bread, but an equally important fact,—they have not the means of buying it.



THE GUELDERLAND FOWL.

In placing some of the breeds of fowls, which we have occasionally introduced, before the reader, we do it to afford him an opportunity of learning something of the various kinds that have been brought among us within ten years, or that have been gained by crosses with the old stock of the country. We give their merits and defects, as we have observed them in the poultry yard, or as we find them described by others.

In Bennett's "Poultry Book" we find the following account of these fowls:—

I am indebted to Mr. H. L. DEVEREUX, of Boston, for the following account of the original importation of this breed, and a description of those in his possession.

"The Guelderland fowls were imported from the north of Holland, some years since, by Captain John Devereux, of Marblehead, in the ship Dromo; and since that time have been bred purely by him, at his place in that town. They are supposed to have originated in the north of Holland. They are clad in a beautiful blue-black plumage, but the flesh is white, tender and juicy. They have no comb, but a small, indented, hard, bony substance, instead, and large red wattles. They are of good size, great layers, seldom inclining to sit; bright, active birds, and are not surpassed, in point of beauty or utility, by any breed known in this country. Their weight is from five pounds for the pullets, to seven pounds for the cocks. The laying qualities of the hens are very respectable, and in this respect they will prove profitable to their owners. It is safe to pronounce the Guelderlands to be a first-rate breed for profit, and especially for beauty."

SPAYING COWS.

We learn that a gentleman at Newburyport had two cows spayed last spring. They have done so well, and given him such satisfaction that he has recently had the operation performed on another. They are all fine milkers. One of the cows spayed last spring, a fine young Durham, gives as much milk now, in October, as she did last May, a few weeks after calving. The other, an old cow, is now in rather low flesh and has fallen off somewhat in her milk. Their milk has varied in quantity, according to the keeping they have had. But they have neither of them fallen off as much as cows in the ordinary condition. This gentleman keeps four cows, and he intends to have a fourth spayed soon, so that he may have his whole set in this condition. We shall watch the result of this experiment with much interest.

☞ "Commentators are folks that too often write on books as men with diamonds write on glass, obscuring light with scratches.

For the New England Farmer.

PROPAGATION OF BROOK TROUT.

MR. EDITOR:—I notice in the *Farmer* of Oct. 22d that a correspondent describes his facilities for fish culture, and inquires, "What kind would be most suitable, and in what manner would it be best to confine them?" In your reply you refer him to me for information. I am happy to respond to any question relating to the propagation of the common brook trout, (having never investigated the habits of any other species,) if I have any information which the public does not already possess. Before referring to my own personal experience and observation on the subject, I will reply to Mr. Howes, by saying, that if he has constructed a pond where he can maintain a living stream through it of the dimensions stated, it is perhaps the best natural arrangement that can be procured for the common brook trout, providing he can keep out other kinds of fish. If the stream running into the pond is provided with a gravelly bottom, it is perfectly in keeping with the habits of the brood trout to ascend the rivulet during the month of October, deposit their eggs, cover them up, and descend to the deepest part of the pond for their winter quarters about the last of November. If Mr. Howes can now add a fixture whereby he can prevent the "young fry" returning to the pond too soon, his arrangement will be nearly complete.

I have but one year's experience in my "trout dissipation," as it is sometimes called, but this little experience has proved a complete triumph in some respects, but in others a partial failure. I have proved (to myself, at least,) that the parent trout will readily domesticate and familiarize themselves to artificial arrangements, so as to deposit and cover up their eggs, and leave them to hatch out after the natural process, without limit or failure. To my mind, this is an interesting consideration, inasmuch as it relieves us from all the difficult and nice labor of artificial propagation.

Having discovered this, it only remains to secure the young fish from being destroyed by the older, who feed upon them. To do this effectually, several pools or ponds must be provided, so as to classify and preserve them; an object not often obtained without considerable expense. With such provisions as I have intimated, there is manifestly no limit to the natural production of the trout.

In my efforts to hatch them artificially, I did not succeed, and I think it was owing wholly to the fact that I did not follow the teachings of the female trout, and cover up the eggs with gravel. Following the directions of writers who have published on the subject, I found no difficulty in compressing both the male and female, and procuring thereby the materials necessary for the artificial propagation; and for about one month every appearance corresponded to results stated in published accounts. But eventually, they all turned white, which was evidence that they had lost vitality. This is one of the failures alluded to above. The other was this: The connection between the spawning ground and the home of the brood fish was not sufficiently secured by wire screening, so as to prevent the young brood getting in with the parent fish, and before I was aware of it, schools of them were there, and becoming less every day, in consequence of the voracious habits of the older fish; under these circumstances, and having no facilities for separating them, the result was, that when I drew off the pond to transfer the brood trout to the spawing bed this fall, I found only about thirty of last winter's hatching. These varied from three to five inches in length, and when first discovered about the first of last April, they were from one-half to three-fourths inch. As I have watched the movements and propensities of the trout, I am convinced that the destruction of the younger by the older is immense, when not prevented by artificial arrangements.

As the result of close observation, I have come to the conclusion that the young associate with the old, indiscriminately, until they find that instead of natural protectors their parents are natural enemies. They then proceed forthwith to shallow water, or hiding places, where the older cannot follow, and thus a few, comparatively, are preserved. CHARLES HUMPHREY.

Lancaster, Mass., Nov. 1, 1859.

For the New England Farmer.

HOW TO RECKON THE COST OF FARM PRODUCTS.

MR. EDITOR:—One of the great reasons why farmers do not succeed any better in their business, is that they do not stop to figure—they are negligent in this particular, and seldom, if ever, know the precise cost of a single article they produce. They work hard and long, taxing their physical powers to the utmost, and neglecting the mental, till they have been persuaded to believe that it is all right that they should produce for others to consume, without adequate recompense to themselves.

Now, what I want to see is this:—I want to see every farmer who produces any article to sell, know exactly what it costs—no guess-work about it; but to *know*, that's the point. I presume no one doubts but that everything we produce has a positive, definite cost, for whether we know it or not, such is the fact; then why deceive ourselves in the matter? I know it is thought to be very difficult to ascertain the precise cost of farm products; but if it is difficult it is not impossible. Then let us try to systematize the business to such a degree as to become familiar with it, and in time it will become so easy that we should be almost ashamed not to know all the facts in the matter. How long would a merchant or manufacturer stand if they did not know the cost of their goods. Take, for instance, a pair of fine gaiter boots. How is the cost of them to be reckoned? The material of which they are composed is taken from every quarter of the globe; many islands of the ocean are brought into requisition to produce them. The French, the English, the Italian and the shrewd Yankee, have all had a finger in the matter; also various machinery, as well as busy hands, have been brought into requisition by many different people, and yet any manufacturer would be ashamed not to know, within one cent, the cost of every pair he makes.

Let us reckon up the cost of cultivating an acre of corn in the same manner that a manufacturer reckons the cost of his goods, and see what we shall make of it. We will take an average acre of New England land, such as is usually put to corn in this section, and see what it *does* cost to raise a bushel. I will, in the first place, make the figures, and then give some reasons for reckoning as I do. The reader will understand that we are considering the matter as it actually is, and not as it is under some extraordinary circumstances made to appear. We will suppose this acre to be worth forty dollars in the market, and located one-fourth of a mile from the buildings, and we will cultivate it in the usual way.

One Acre of Corn.	Dr.
May 10, Two men, two yoke oxen and plow one day	$4,25
" 15, One man, four oxen and cart one day hauling manure	3,25
May 15, Ten loads manure	10,00
" 16, One man one day, and yoke oxen and harrow half day, spreading manure and harrowing	1,75
May 17, Man, horse and boy ½ day furrowing	75
" 18, Man and boy one day planting, $1,50, seed 25	1,75
" 19, To putting up line, &c	25
June 6, Two men, horse and plow cultivating and hoeing	2,50
" 6, To replanting and ashing	2,00
" 25, To hoeing and cultivating	2.50
July 10, To pulling weeds	50
Sept. 10, To two men cutting stalks and stooking do	2,00
" 25, To carting stalks to barn, &c	50
Oct. 12, To harvesting	2,00
" 13, To husking and taking care of butts	2,00
" 13, To interest on land, capital and taxes	3,00
" 13, To fencing and rents of barn and corn-house	3,00
Dec. 15, To shelling and marketing corn	5,00
	$47,00

Acre of Corn.	Cr.
Dec. 15, By 30 bush. shelled corn sold	$30 00
" 15, By 6 bush. ears soft corn sold	2,00
" 15, By stover and pumpkins	5,00
	$37,00
Net loss on crop	$10,00

Thus it will be seen that we have cultivated our crop in the most prudent and economical manner; we have charged nothing to the crop but what rightly belongs there, and have allowed a high average yield, and sold it for much more than farmers usually get, and yet have made a net loss of ten dollars!

I want to say here, that, in my opinion, there are but comparatively few acres of corn planted in this State but what run the owner in debt more than this has. And what is true in regard to this crop is true of most others; only much more so, for aside from the hay crop the corn is the most reliable, as it is the most important upon the farm. I do not wish the reader to understand by this that I suppose the farmers usually sell their corn. This is not so. Farmers in this section are generally buyers of this article, and consume upon their farms this and most other crops, and by this way of doing business do not generally realize more than one-half what we have allowed.

The farmers, I think, have a peculiar way of mystifying their business by running one thing into another, as by feeding out their hay, corn, &c., to make more manure at a loss of some fifty per cent.—to raise more corn at still another loss, and in this way go on, year after year, and do not find out their mistake till their physical energies are broken up, and, unless they have had some outside successes, a portion, at least, of their capital is exhausted.

It seems to me, that farmers, like all other classes of men, should call things by their right names, and if hay will bring a dollar a hundred, and corn a dollar a bushel, why not sell it, and not feed it out to stock, when we cannot possibly get more than one-third of it on the growth of our cattle, and oftentimes not anything. I very well know that stock makes manure, and manure, judiciously applied, makes hay and corn; but all these things have a dollar and cent value, and should not be purchased at too great a cost. What I want is this, (as we have it from the best authority, "that the laborer is worthy of his hire,") that the man who labors upon his farm, (if judiciously,) should so understand his business as to realize as much as other laborers get. I can see no reason why a man who owns a farm should throw his labor away, or any considerable portion of it, any more than the merchant or manufacturer, who, to save clerk-hire, do their own work. One of two things is evident, that the farmer gets no return or per cent. on his capital; or, reckoning six per cent. on his capital, he gets no pay for his labor. I mean, of course, by work on the farm.

I know very well that it will be considered unusual to reckon some things which I have put into this crop. But, what if it is unusual? Do they not rightly belong there? The old custom of half reckoning, or not reckoning at all, is what I want to see broken up, and let every crop and every animal upon the farm answer for itself. In this way, and in no other, can the farmer ever hope to stand on an equality with all other classes of men. I am perfectly aware that different localities, seasons and circumstances, will vary the figures somewhat, so that no positive rule can be given which will always be applicable; yet, this rule will always hold good,—never deceive yourself, nor cut your corners too close, for there will always be some waste or losses which no system can prevent. Our business is extremely hazardous. Crops are liable to be cut off or broke in upon, cattle to sicken and die, and being exposed to the extreme variableness of the climate, we find, after the utmost care, that we are constantly running great risks to health and future enjoyment.

However, let us stick to our caption, and see what we can do to make up this loss on our corn crop, for we have made a positive loss there, and the shrewdest Yankee that ever was made, cannot figure it any other way. Suppose we go into the stock business, and see if that will extricate us from the dilemma? This is a very important part of agriculture, and most of our friends who are fond of good roast beef and good sweet butter and milk, (barring the naughty milk-man,) consider it very profitable. Let us see. When a calf is first dropt, his hide is worth one dollar, the meat will pay for taking it off for the pigs, and I presume that no farmer would make any other use of it. Then the account will stand thus:

Calf.	Dr.
To self	$1,00
To 5 qts. milk per day one week, at 2 cts. per quart	70
To 6 qts skim milk per day seven weeks, at 1 cent	2,94
To 1½ bushels meal	1,50
To care and attention, 3 cents per day	2,94
To 18 weeks at grass, at 10 cts. per week	1,80
To 26 weeks barn, at 50 cts. per week	13,00
	$22,88

Thus it will be seen that our calf has cost us at one year old, $22,88. Now shall we sell it or grow it up into an ox or cow? If it is decided to sell it, a loss of more than one-half must be sustained. If to keep it, my word for it, the loss will be greater still. This is stock-raising. It will be seen that there are several small items that I have not put into the cost of this calf, such as rents, interest, &c., which legitimately belong there. Usually in reckoning the cost of cattle, we offset the labor account against the manure; but no one will suppose that a calf can be taken from the cow at one week old and cared for till it is eight weeks for any such pay.

I know that the question comes up here, how is it, then, that the farmers get along? I can very easily answer that question, but can do so, perhaps, in no better way than in the language I have used before, and say that no poor man can live by farming, unless he works for wages. I am perfectly aware that this view of the matter is directly antagonistical to the views of those who undertake to shape public opinion. But what if it is? If it is true, it will stand, if not, it will fall. To take a narrow view of the subject, I might say the popular one, it would seem to be for the interest of all other classes of men but the farmers to have farm products cheap. But, if the farmers were wise, they would at once dispel this popular clamor of glorifying them in order to fatten upon credulity. I freely admit that such arguments, in times past, seemed plausible and generous, but I begin to see through the film that has been placed upon my eyes, and rather reluctantly admit that it now looks a little foxy. Why is it that all farmers who have no outside help, find that it is with the greatest difficulty that they can meet their engagements, and are continually in debt to the merchant, the mechanic and the money-lender. It is, because they have to sell their products, almost universally, under the cost—many less than one-half what it costs to produce them. And I hesitate not to say that many farm products do not pay mechanics' wages, simply to harvest and market them. The amount of the loss to the farmers of New England this year, *on the corn crop alone*, is sufficient, if sustained by the traders and manufacturers, to close the tills of every bank in the State, and "*nary red*," would be the universal response. In all other kinds of business, as far as I know, some system or uniformity of prices prevails. What the mechanic charges for a certain job to-day will be the price all the year, always charging a small profit on the material used and a living price for his work. This is right, and with this arrangement we find no fault. We expect to pay the traders and mechanics a fair profit; but how is it when we have anything to sell!—is there ever a word said about profit or cost? Not at all! We can buy the article so and so, and that settles the matter. Now, what I want is, to have the farmer *know* what the article costs, and not *scab* the *craft*. T. J. PINKHAM.

Chelmsford, Oct., 1859.

KEEPING CIDER SWEET.—Take a barrel that will not leak in the sides, with bottom in and top out, bore enough holes in the bottom that there will be no trouble in the escapement of the cider. Now take a doubled piece of flannel and lay on the bottom neatly, that no sand can run through. Place a layer of sand thereon, to about the depth of six inches, and pulverize charcoal and make a very thin layer, then another layer of sand of the same depth, again another layer of charcoal, the last, a heavier layer of sand. This barrel of sand and charcoal, is to set over a tub which the cider can run in. The process of cleansing now commences. Draw from your cider barrel and pour on the sand, &c., taking care not to stir up the sand much, rack the whole through, putting the rectified into another sweet barrel, in which, afterwards, put in a pint of mustard seed, and your cider is fit for any company. Too much charcoal is a damage, as it colors it.—*Rural New-Yorker.*

HOW TO KEEP CROPS GOOD.

"Let this be held the farmer's creed—
For stock, seek out the choicest breed;
In peace and plenty let them feed;
Your land, sow with the best of seed;
Let it nor dung nor dressing need;
Inclose, plow, reap, with care and speed,
And you will soon be rich indeed."

Never keep a poor or malformed animal to breed from, and in selecting seed, strive always to procure the best. If you have a good animal, reserve it, and sell your mean calves, lambs and pigs to the butcher; he can turn them to more advantage than you can, and your stock will escape contamination by having them taken away.

In the vegetable kingdom, the most healthy and vigorous plants are invariably those which spring from the most healthy and vigorous stocks. Corn, or indeed most other vegetables, may, by selecting inferior seed for several consecutive seasons, be so deteriorated in quality as to be comparatively worthless, In the same manner, and with almost the same facility, we may destroy the cow or ox. By selecting our most valuable and symmetrical animals for the shambles, and reserving to ourselves as breeders only those that are worthless or deformed, we are certain to perpetuate the deformities and diseases which have been the curse of the breed, and which, acting by obvious and irresistible laws over which we can exercise no efficient control, produce a distinctive or family configuration as thoroughly inwrought and inalienable as the principle of life itself.

Every person who understands the principles of vegetable physiology, knows that it is one of the great fundamental laws of nature, that "like produces like," and this law is equally as pervading a principle in animal, as in vegetable life, and presents us with an injunction for the regulation of our efforts at improvement; and this is eminently worthy of our regard.

In casting our eyes around us, we shall at least perceive that this law has not only been systematically developed by scientific breeders in for-

eign countries, but that it has every where received from the intelligent and reflecting portion of the community, the attention and encouragement it deserves.

Were we to go through our several field crops at the commencement of the season of maturation, and select the best and earliest ripe of the divers sorts, we should soon find the benefit of such a course, and our fields would present at harvest a very different appearance from that which now so frequently causes us to turn from them with dissatisfaction. It would cost but a mere trifle to select seed in this way, even in the case of the cereal grains.

For the New England Farmer.

REVIEW OF THE SEASON.

Mr. Editor:—It may be instructive as well as useful to the public, to examine the records of the past, and define the peculiar characteristics of the season, which have a bearing on the prosperity of the farmer, and compare them with the records of former years. Although we have had a partial failure in some crops, yet others have yielded abundantly, so that kind nature, in dispensing her gifts to man, only changes her abundance from one crop to another. The growing season commenced under favorable circumstances in regard to crops. The weather was rather dry, and the earth moderately warm, which fitted it well for the reception of seed, which was committed to the soil in the proper season, with what effect a review of the months will now fully explain.

April had a mean temperature of 39.36 being 2.12 below the mean for the past seven years. The amount of rain was 2.26 inches—about the same quantity that fell in April, last year; it fell on eleven days. Two inches of snow fell during the month. Grass commenced growing about the 14th, but was backward during the month, and the forests were bare and leafless. The amount of cloudiness was about fifty per cent.

May had a mean temperature of 58.72, being 4.69 above the mean, and was the warmest May for the last seven years. We had 1.89 inches of rain, being an unusually small amount for May. The amount of rain in May, 1858, was 3.56 inches, and in 1857, 5.64 inches. Here was the commencement of a season much too dry for vegetation, for the ground had not yet been fully saturated with water. The first five days of the month were entirely free from clouds, which is a very unusual phenomenon in this region. The amount of cloudiness during the month was about forty-two per cent. There were frosts on the 3d, 11th, 23d and 31st days, besides others on low lands not noticed. The last was quite severe, killing corn and other vegetables in many places. The first thunder storm took place on the 7th, and another on the night of the 26th; these were the only thunder storms during the month. There was a beautiful halo around the sun on the 31st day, which lasted from ten A. M., to one P. M., and was extremely bright between eleven and twelve A. M.

June had a temperature of 62.44, being 2.24 colder than the mean, and is the coldest of the past seven years, with the exception of 1857. The first half of the month was extremely dry, and the last part moderately wet. The amount of rain was 4.12 inches, being more than in any other month except September, during the season. The amount of cloudiness was fifty-seven per cent. Rain fell on seventeen days. There were four thunder storms, and a high wind accompanying the last, on the 29th. On the same day, the mercury stood at 92, at one P. M., which was the highest during the summer. The extremes of temperature were 36 and 92. White frosts occurred on the mornings of the 6th and 12th days.

July had a mean temperature of 67.30 being 2.35 colder than the mean, it being the coldest July for the past seven years with the exception of 1853. The extremes of temperature were 41.50 and 90. This was the only month that escaped frost in this region, but report says there was frost in some places—probably on the morning of the 5th, which was the coldest, with a temperature of 41.50, bordering on frost. Rain fell on 11 days, and its amount was 1.315 inches, which was less than the mean of the three previous years by 1.48 inches, being less than half the usual quantity. Thunder was heard on four days. Amount of cloudiness, 44 per cent.

August had a mean temperature of 67.76, being 2.05 warmer than the mean, and was the warmest August for the past seven years. The extremes of temperature were 43 and 87.50. Rain fell on 11 days, and its amount was 2.845 inches, which was 3.09 inches less than the mean of the three preceding years. The earth was extremely dry during the month. Many wells and springs were dry, and all streams exceedingly low. There was a light frost on the morning of the 30th, sufficient to injure crops on low lands.

September had a mean temperature of 56.43, being 2.10 colder than the mean, and was the coldest of the past seven years. Rain fell on 17 days, and its amount was 4.615 inches, being a little more than the average fall, but was not sufficient to affect the lower springs, nor give the surface its usual amount of moisture in consequence of the protracted drought of summer. Since the frost on the 15th, the forests have put on their hues of "purple and gold," the fading beauties of their autumnal dress, and the precursor of early decay. Soon the deciduous forests will be striped of their foliage, which has been so beautiful in its green and sombre hues, showing nature beautiful even in decay.

This may be said to be a cold, dry summer, for the nights have been unusually chilly. There has been a large proportion of chilling south-east winds, consisting of nightly aspirations, when the wind has been at every other point during the day. This has had a bad effect on some crops, especially corn. The whole number of consecutive days free from frost, was 78, while last year we had 142 days. The last frost of spring occurred on the 12th of June, and the first of autumn on the 30th of August. The mean temperature of the past six months was 57.50, and the amount of rain 17 inches, being an average of 2.83 inches to each month.

The corn crop was the nearest a failure of any

crop, being light and late, and somewhat frost-bitten, so that the yield will be small and of poor quality. Grass was our next lightest crop, yet it was of excellent quality and well secured. Intervale meadows yielded nearly an average crop, but upland was unusually light. Wheat was good, yet there was but little sowed. Oats were a first rate crop—perhaps were never better. Potatoes are a full average crop, and entirely free from rot, and are tolerably plenty. Buckwhe at was destroyed by the frost and was mostly lost. Apples are quite plenty, although of poor quality. Plums are an entire failure, as well as fruits of the drupe kind generally.

Shall we hear similar reports of the season and the crops from other parts of the country?

Brandon, Vt., Oct. 24, 1859. D. BUCKLAND.

NEW PUBLICATIONS.

WELLS' PRINCIPLES AND APPLICATIONS OF CHEMISTRY; for the use of Academies, High Schools and Colleges. Introducing the latest results of Scientific Discovery and Research, and arranged with special reference to the Practical Application of Chemistry to the Arts and Employments of Common Life. With Two Hundred and Forty Illustrations. By David A. Wells, A. M. New York: Ivison & Phinney. 1859.

This book is especially prepared for the use of academies, seminaries and colleges, and will undoubtedly prove of great utility in that direction; but it is not there, after all, where its usefulness ought to be mainly felt. There are other places, vastly more numerous and none the less appropriate, where it would charm the mind, give it mental strength, and prepare it better to understand the principles which govern everything we do. For every employment, however simple and humble, requires something of the aid of art and science. In cooking the breakfast, both are indispensable, and so in sewing the patch upon the knee of the pantaloons, in cutting the dress, or any of the most common and ever-recurring employments of life. The moment the Indian begins to construct his wigwam of bark or boughs, or the Esquimaux to construct his snow-hut, he calls to his aid something of the arts and sciences, and civilizes and enlarges all his powers by the operation. And this is the effect upon us all in opening, as it were, and investigating natural laws.

The common mind needs more of this knowledge; a better understanding of what *gravity* is, for instance, or *cohesion*, *attraction* and *crystallization*. It knows that the sun is warm, and yet is told that it is nearer in the winter when the thermometer is at zero, than during the fervent heat of midsummer! How perplexing this must be, and how refreshing and gratifying to learn in an easy and familiar way, the reasons for these seemingly contradictory assertions.

Let this book, then, become the companion of the fireside, the quiet, unassuming and intelligent friend for every leisure hour; let it be remembered during the engagements of the day, and perplexing questions that arise during working hours be noted, so that reference may be had to the work on precise points, and a store of invaluable knowledge may be acquired that shall give the labors of life a new value. The book is a library in itself. It contains the kind of information most needed by the young of both sexes.

WELLS' SCIENCE OF COMMON THINGS; a Familiar Explanation of the First Principles of Physical Science. For Schools, Families and young Students. Illustrated with numerous Engravings. By David A. Wells, A. M. New York: Ivison & Phinney. 1859.

What do we know of *matter*, and *how* do we know it? There may be a sensible, and in some degree, satisfactory answer to these questions—but who will give it? Can you, young man? We observe that you are studious and inquisitive, but these questions, and a thousand others, puzzle you daily. This book will help and interest you, and in seeking instruction from its pages your life will be a happier and more useful one. Let us illustrate it,—or, rather, let it illustrate itself, in an agricultural point of view.

Why does dew fall more abundantly on cultivated soils than on barren lands?

Because cultivated soils (being *loose* and *porous*) very freely radiate by night the heat which they absorb by day; in consequence of which they are *much cooled* down, and plentifully *condense* the vapor of the passing air *into dew*.

Pause, my brother laborer, a moment, and look at the wisdom and beauty of this arrangement, and it will nerve the arm which guides the plow and hoe, and cheer the heart that hopes for abundant harvests. We are all too ignorant of the common things of life,—the things we see, upon which we work and depend for comfort and subsistence. Let us devote more leisure hours to their investigation, so that we may better understand nature's laws, and thus shield ourselves against those losses which spring from a want of knowledge of nature's changes around us. But we will let the book give another familiar illustration of itself.

Is the air of our rooms always in motion?

Yes; there are always *two currents of air* in the room we occupy; one of *hot* air flowing *out* of the room, and another of *cold* air flowing into the room.

How do you know that there are these two currents of air in every occupied room?

If I hold a lighted candle near the crevice at the *top of the door*, the flame will be blown *outwards* (towards the hall;) but if I hold the candle at the *bottom of the door*, the flame will be blown *inwards* (into the room.)

This book contains *two thousand and fifteen* questions, of a character similar to the above. If a person is building a house, and does not understand how to construct chimneys so as to afford

a good draught, the perusal of this book may be worth ten dollars to him, or ten times ten. We knew a man build a house, who rather churlishly refused to listen to our suggestions about the construction of his chimneys, and after tormenting himself and family with smoke and flame for six months, expended $400 to put them right! The verdict of most persons would be,—"sarved him right!"

EXTRACTS AND REPLIES.

IS MARL A FERTILIZER?

A neighbor of mine wishes an answer to the following inquiry: he says—"I wish to be informed whether leaves and other vegetable substances, falling into shallow water and sinking to the bottom, will, in process of time, turn to marl?" J. L. C.

Haverhill, N. H., Oct. 20, 1859.

REMARKS.—No. Marl is an earthy, not a vegetable substance; and any earthy substance in which the proportion of calcareous—that is, *limy* matter is apparent, mixed with sand or clay, is styled in popular language, a marl. Of this there are three principal varieties, 1. Clay marl. 2. Sand marl; 3. Slate or stone marl; 4. Shell marl. If you find a substance which you suppose may be marl, pour a little vinegar upon it, and if it effervesces, it will probably be marl, and will contain fertilizing properties.

QUESTION ABOUT A CRANBERRY MEADOW.

I have, in the county of Norfolk, a piece of land which is valuable principally on account of its descent from my great grandfather, it having been in the name over one hundred and fifty years. There is upon the lot about two acres of swale which has been mowed yearly for seventy years, but is too strong to plow. There are many beds of cranberries upon the land, of a good quality. Contiguous to this swale are four or five acres of moist upland, where good crops of corn have been raised, also rye and potatoes; the land is very free from frost, as only one year, that of 1816, for a half century has the frost injured corn. The soil is rather shallow, with many small round stones. The question is, whether it would be advisable to try the cranberry culture upon this lot? JESSE WHITING.

Groton Junction, Oct., 1859.

REMARKS.—We cannot tell, away from the meadow, but should think it would. Try a portion of it, and see how it succeeds.

"SAW-DUST AS A FERTILIZER."

In answer to the inquiry contained in your journal of Oct. 29 as to the value of saw-dust as a fertilizer, I would say its virtue in the raising of beans, equals, if not surpasses, any enricher of soil I ever saw. As a fertilizer to other vegetable products I have never as yet seen it attempted, but purpose the coming year to test it further. It was found most productive by being dampened when used, and applied rather generously, well incorporated with the soil receiving the deposite beans. OAK HILL.

Nov. 4, 1859.

FINE OXEN.

I saw at the Essex House, in Salem, to-day, a pair of oxen, grown at Greenland, N. H., six years old, that weighed 7000 lbs.—varying only about 25 lbs. from each other. They were of a beautiful red color, bright eyes, and well formed. I have never seen any cattle superior to them. I have heard of individuals animal, nine years old, that weighed 4000 lbs., but I think these surpassed such an ox—all things considered. I hope the proprietor will be well rewarded for exhibiting them—their sight is more interesting than that of elephants or wild boars. P.

Oct. 27, 1859.

CARROTS.

Mr. B. H., one of the most successful cultivators in this town, informed me that he had gathered six tons of as handsome carrots as he ever saw, from 27 square rods of land. This would be about one ton to six square rods, or 27 tons to an acre. The price of carrots at this time is $8 per ton, consequently the produce of an acre would amount to 8 times 27, or $216 per acre. Considering that carrots are not an exhausting crop, I look upon this as good doings. Few crops yield so well this season—cold as it has been.

South Danvers, Oct. 27, 1859. P.

BREMEN GEESE.

Will you be good enough to inform your readers who has the pure blood Bremen Geese for sale, described in your paper of Sept. 24.

Hartland, Vt., Oct., 1859. W. S. GROW.

REMARKS.—We do not know. Will some one who has them reply by letter to the inquirer?

APPLE OR CIDER STAINS ON LINEN OR COTTON.

Will you permit an old subscriber and faithful reader of your valued journal to inquire, if any of our good mothers of New England can inform me of the best and most effective manner of removing stains of apple or cider from linen or cotton, after being fully dried in? If so, they will oblige their suffering friend,

"OAK HILL."

THE CONCORD GRAPE.

The more we know of this grape, the better we like it; and this appears to be the case with nearly everybody. The exceptions are those who have long settled in their minds that the Fox grape, being a universally condemned variety, every seedling possessing any portion of its flavor, must necessarily be worthless. To us, and to ninety-nine in a hundred, the Fox grape aroma is agreeable, and constitutes one of the most attractive qualities. The *Southern Cultivator*, published at Richmond, Va., thus refers to it. "A fine bunch of grapes, of the variety called Concord, was brought to our office a few days ago, by Mr. E. G. Eggeling, florist and nurseryman, near this city. The bunch weighed four-

teen ounces; the fruit above an average size, being about as large as a Black Hamburg, in appearance very much like it, with a very thin skin, a perfect bag of juice, and of the most delicious flavor."—*Germantown Telegraph.*

AN EXTENSIVE PEAR ORCHARD.

The past week we visited a very extensive pear orchard in this country, perhaps the largest in Western New York, planted by Messrs. Starks & Mattison, embracing forty-five acres, on which are growing over 4,800 young standard pear trees, all healthy, and making a good growth, and many of them bearing good fruit. So well pleased were we with the appearance of this orchard, that we made a rather careful examination, and gained some facts, which may be of interest and profit to our readers. These trees were from three to five years old when planted, which was done during the winter of 1857-8. The winter being unusually mild, planting, which commenced in December, was continued through January, February, March and April. Occasionally, freezing weather would put a stop to the work for a few days. No difference is apparent in the growth of the trees between those which were planted in the fall, spring, or winter, and not a dozen out of the number died. The varieties are as follows:

Flemish Beauty	224	Dearborn's Seedling	58
Rostiezer	112	Gansel's Bergamot	50
Louise Bonne de Jersey	231	Columbia	58
Bartlett	1,000	Beurre Diel	294
Doyenne Gris d'Hiver	27	Winter Nelis	58
Seckel	270	Lawrence	311
Virgalieu	1,346	Glout Morceau	116
Onondaga	58	Vicar Winkfield	373
Sheldon	151	Easter Beurre	70

The soil is a clay loam, or as the proprietor expressed it, a "limestone loam" for eight to ten inches or more, subsoil clay, though not very stiff, having an admixture of loam, with a little sand, the whole resting upon fossil lime rock. The ground was prepared by subsoiling, about eighteen inches deep, and the trees planted twenty feet apart each way. In setting them out the roots were covered with earth to the depth of about one inch, over which was spread something like two inches of stable manure. The remaining portion of the opening was then filled with earth to grade. The planting being completed, the upper portion of the roots were about one inch below the average grade of the soil. About one-half a bushel of earth was placed at the foot of each tree, in a conical form, immediately after planting, which was allowed to remain until the middle of May, and was then levelled and the earth spaded as deep as practicable without interrupting the roots, for a space of six feet in diameter. In the fall of 1858 a mulching of about two bushels of manure was given to each tree, over which was placed earth in pyramidal form to the depth of one foot, to protect from mice and severity of winter. This was allowed to remain until the first of May, last when all was made level, and spaded as before, over an area seven feet in diameter.

The trunk of every tree, from the ground to the branches, is covered with a bag made of cotton cloth, sufficiently large to admit of three or four years' growth, the cloth being fastened to the lower branches, and hanging to the ground. This, the proprietors believe, protects the trunks from the sun, and from sudden changes of temperature, and in a great measure prevents blight and other evils, such as the hardening of the bark, the contraction of the pores, thus preventing the free flow of sap, necessary exhalation, &c. Two cedar stakes are driven by each tree, to which it is fastened, preventing swaying by the wind, in any direction.

The rows run east and west for about three-fourths of a mile, and are as true as it is possible to plant trees. At the western extremity is planted a belt of Norway spruce, across the entire orchard, consisting of two rows ten feet apart, and the trees in the rows twenty feet apart, those in one row being opposite the open space in the other, leaving the trees ten feet apart. Two similar belts are planted through the orchard, at about equal distances, though the highest points of land are selected for the purpose, and these it is thought will afford all necessary protection from the wind, as the trees are made to head low.

Now, for the result thus far. The trees are healthy and vigorous, and making a fine growth, many having already made shoots from three to four feet in length. Although having had but one season's growth since planting previous to the present, many of the trees are bearing fruit. On one Seckel we counted 131 specimens, and on the Bartlett, Flemish Beauty, &c., fully as many as the trees should be allowed to bear. On removing the cloth from the trees we found the bark glossy, smooth, and soft to the touch, yielding under the pressure of the finger. No blight has ever been seen in the orchard, and this exemption the proprietors think is mainly attributable to the protection afforded the trunks by the cloth.

The proprietors are entitled to great credit for their enterprise, and we hope to see them amply remunerated, as we have no doubt they will be before many years. Mr. Mattison is an experienced nurseryman, who knows how trees should be grown and cultivated, and practices himself the thorough course that he recommends to others, of which this orchard gives abundant proof. Nearly every tree he has grown from the seed; and here we may say that Mr. M. claims an improved method of cultivating pear seedlings, by root-pruning during growth, thereby securing a larger number of fibrous roots, which, to some extent, prevents leaf blight, and ensures greater safety in the removal of trees, even when large.

This orchard, if well cared for, for a few years longer, must yield a princely revenue. We hope these gentlemen will have many imitators in Western New York; and, indeed, in all parts of the country where fruit can be grown with profit. —*Moore's Rural New-Yorker.*

ACQUAINTANCE RESUMED.—We are happy to call the attention of readers to an article by "*Norfolk,*" in another column, and to learn that New Hampshire air, and New Hampshire fare, have brought back to our correspondent health, energy and action once more.

CURE WANTED.

I have a three year old colt that settles back on his halter, brings his under lip up on the hitch strap and grunts or makes a noise like a horse cribbing. I don't know but it is the first stages of cribbing, but I have never seen him get hold of anything and grunt—nothing more than to bear down on the halter and grunt. What is the matter with him? J. WARREN.

Charleston, N. H., 1859.

REMARKS.—It is difficult, from such, or any description, to tell what the matter is with the colt. There is some morbid affection, or the animal would stand quietly in the stall when properly fed. There is actual disease, of some kind, or there remains some want unsupplied. It appears that the colt is stabled—is he there constantly? If so, let him run an hour or two, each day in the field where he can have access to plowed ground; add to this *regular*, and sufficient feeding, and try the plan. If this fails, some wiser head than ours must prescribe for him, from an investigation of the case.

PHOSPHATE OF LIME VS. ASHES.

MESSRS. EDITORS:—I have heretofore been slow to adopt the new notions in agricultural improvements, especially in the use of the so-called fertilizers. But within the last two years I have learnt of some good results from the application of superphosphate of lime, and this season I have for the first time used that fertilizer. I obtained some of Coe's superphosphate of lime, and on the 23d of May planted my potatoes, and about the same time planted my garden vegetables. I had spread and plowed in a small quantity of stable-manure. According to my usual custom, I planted in drills—tubers about 20 inches apart in the row, and cut so as to be not more than three or four sprouts in a hill. I planted two rows side by side. In one I put unleached ashes, as many as I could well hold in my hand at once, in each hill. In the other I put two-thirds of a gill of superphosphate of lime in each hill. Very early in the season there was a marked difference. Where the phosphate was put, the vines grew more rapidly, and when they had attained their growth, hey were one-third to one-half larger than those where the ashes were put. I have now dug the potatoes, and will here state the result:

I dug ten hills where ashes were put, which contained 36 of good size—weight, 8½ lbs.; small size, weight, ¾ lb.=9¼ lbs. Ten hills where the phosphate was put, 55 of good size—weight, 15¾ lbs.; small size, weight, 1¾ lbs.=17½ lbs.

I thought the difference was so great that this statement might not be believed, and my neighbor, Mr. William Reed, accepted my invitation to be present at another trial. Mr. R. made the figures:

I dug ten hills where ashes were put, 34 of good size—weight, 6 lbs. 5 ounces; small size, weight, 11 ounces=7 lbs. Ten hills where phosphate was put, 48 of good size—weight, 15 lbs. 3 ounces; small size, weight, 1 lb. 9 ounces=16 lbs. 12 ounces.

Mr. Reed thought there must be a difference in the condition of the land that made a part of the difference in quantity. I then dug five hills of each kind in another place.

Five hills where ashes were put, 16 of good size—weight, 3 lbs.; small size, weight, 2 ounces=3 lbs. 2 ounces. Five hills where phosphate was put, 28 of good size—weight 6 lbs. 11 ounces; small size, weight, 7 ounces=7 lbs. 2 ounces.

In the growth of my other vegetables, I think I have seen much benefit by the use of the phosphate of lime. A knowledge of these facts may be of some advantage to farmers and gardeners. —JOHN R. HOWARD, *in Boston Cultivator.*

THE SMALL STINGING NETTLE.

This nettle is the plant so common all over New England, and one which is well remembered through life by those who were brought up on a farm. The quaint old herbalist, CULPEPPER, remarks, "that they may be found by *feeling on the darkest night.*" The small figures are the flowers of the plant enlarged.

NETTLE, *Urtica*, (from *uro*, to burn; in reference to the stinging properties of most of the species.) An extensive genus of herbaceous or shrubby plants of little beauty, and which are justly looked upon in the eyes of the agriculturist as mere weeds. The herbage in all the species is copiously armed with venomous perforated bristles, each of which has a bag of liquid poison at its base. This liquor, by the slight pressure required to pierce the skin, is transmitted into it, causing great irritation. Many of the numerous exotic species have not this stinging property; but the sting of common nettles is not to be compared with that of some of the

Indian species grown in the gardens of Europe. These are, however, all surpassed in virulence by one which in Timor is called *duoun setan*, or devil's leaf, the effects of which are said by the natives in many cases to cause death. In England, the indigenous species of nettle are three; viz. 1. Roman nettle *(U. pilulifera,)* an annual plant, growing in waste ground amongst rubbish, chiefly near the sea. The herb is armed all over with peculiarly venomous stings. The stem is branched, leafy, bluntly quadrangular, often purple, about two feet high. 2. The small nettle *(U. urens)* is found to be in all cultivated ground a troublesome weed, especially on a light soil. It is annual in habit, flowering from June till October, smaller than the last, and of a much brighter green; its copious stings hardly less virulent. The several parallel ribs of the leaves form its distinguishing character. The whole plant being refused by every kind of cattle, should be carefully extirpated from pastures. 3. The common or great nettle *(U. dioica,)* which is a noxious perennial weed, growing almost everywhere, and flowering in July and August. The root is branching and creeping, with fleshy roots, and many fibrous radicles. The herb is of a duller green than the last, erect, three feet high, with less irritating stings. Leaves large, heart-shaped, spreading, pointed, strongly serrated, veiny. The leaves are employed for feeding poultry, especially in the winter; when boiled, they are said to promote the laying of eggs. Asses devour nettles eagerly, but all other live-stock refuse them unless they are dried. In the western islands of Scotland, a rennet is prepared by adding a quart of salt to three pints of a strong decoction of nettles; a tablespoonful of which is said to be sufficient to coagulate a bowl of milk. The young tops of the common and smaller nettles may be boiled as potherbs during spring, and eaten as a substitute for greens; being not only nourishing, but mildly aperient. The tough fibres of the stem may be manufactured like hemp, and are often found in winter naturally separated and bleached. The roots are astringent and diuretic.

For the New England Farmer.

LAYING DOWN THE ISABELLA VINE.

MR. BROWN:—At this season of the year, the open air grape vines that are trained up upon a wall or building should be taken down and laid upon the surface. I have thought that my former directions given some time since, may be repeated. Most cultivators are aware that the Isabella vine suffers more or less every winter. Long shoots of the previous year's wood, and occasionally the whole vine, is winter-killed, (so called.) Many attribute this to the extreme cold; I believe it to be caused by the warm days of winter. In our variable climate, where the thermometer sinks to zero, followed the next day by a bright sun with the warmth of spring, a plant so susceptible as the vine is generally affected by these sudden changes, particularly as the sap does not take lodgment in the roots, but, as Dr. Lyndley says, "is always in motion at all seasons, except in the presence of intense cold." Can we wonder at these results? "If ever," says the same writer, "sap settles to the roots in a visible form, that is owing to temporary causes, the removal of which causes its instant reascent." My method, for years, has been to take the vines and lay them along upon the ground, throwing over them a light covering of leaves, litter or the refuse of the garden. Should the vine be so situated that I cannot conveniently take it down, I tack up matting or any slight covering sufficient to keep off the sun's rays. That it is the warm days of winter that kill many of our half-hardy shrubs, as well as vines, is exemplified in the culture of the Morus Multicaulis. This plant was found to winter better on the north side of hills than upon the south. J. M. I.

Salem, Oct., 1859.

For the New England Farmer.

SAW DUST AND SHAVINGS AS FERTILIZERS.

MR. EDITOR:—In your last issue I noticed a piece on Saw-Dust as a Fertilizer. I would say that whether it is a fertilizer or not, it depends very much upon how it is used and of what wood it is made. Dry saw-dust is one of the best of articles for bedding horses and cattle, to take up the urine and keep the cattle clean. But hard wood is the best, and rock maple the best without doubt for the land. Many of your readers, I presume, can recollect how well the grass used to grow on Rock Maple land, and where, especially, the trunks were left on the ground to rot, as they used to be fifty years ago, as I very well remember.

Saw-dust put on land, right from the saw, I think is not just the thing, unless on dry, cobbly land. I recollect of putting a load on a spot some two square rods, where, being on a side-hill, there was not soil enough to make it grass over for years before, but since, I have seen no signs of barrenness. I believe it to be a retainer of moisture, if nothing more.

Hard wood shavings are also good for bedding, such as come from planing machines in making wash-boards, &c., &c., they being very fine and soft. They cause the manure to heat much faster, and, of course, will need overhauling much sooner than usual. I think hard wood saw-dust and shavings should be used freely for bedding, even if you have to go miles after them, and they will answer every purpose of going to Peru for guano.

Meadow mud is not good for bedding, being very soft when wet, but good to put into the yard or barn cellar, and even to spread on ground when you sow down. I did this on a piece of ground I took up from pasture, and have noticed that my cattle graze on that part where I put the mud, two or three times as much as they do right by the side where I did not put any, and yet the land where I put it was the poorest.

Something is said in these days against barn cellars, because manure heats, and the stench arising injures the hay, and also the cattle, where they have to breathe the foul air. I have no doubt but that if cattle have to breathe this bad air, it must be injurious to them, as well as to the hay they eat. But why have it so? This heating and bad odor should not be suffered to accumulate. My father-in-law (who is about 90 years old,) said

to me this summer, that nothing is lost, and if it goes off in the air, it comes down in the dew. True, I said, but it might come down in some old swamp of my neighbor's, and I, as well as he, would not get much use of it. To save it, put in anything, even sand, that is worthless, apparently, if you can get nothing better, to take up the moisture, and that, by overhauling, will prevent heating, and double the quantity and value of manure will be made to what would be in the old way of cows in the yard in summer, and manure in winter thawed out under the eaves, and wind and water driving off all this bad odor people are so afraid of in cellars. There is no body so hard up but that they can find sand for this purpose, if nothing better. Keep the cattle in the barn at night and put one or two shovels-full of sand to each animal, together with straw, old meadow hay, saw-dust, or shavings that are fine, to make a good bed, and you will be astonished at the amount of manure you will make. By so doing, you will have it all, and ready for corn.

Some farmers not only put sand or loam on the floor, but have a pile on the barn cellar to throw upon the droppings every morning.

People lose much manure by being obliged to let their cattle out in winter, and perhaps summer, to some brooks or springs to obtain their drink. Some let them go as they please, (which is the best way to ensure the cattle to drink what and when they wish.) Others drive them, perhaps twice a day, and if they drink when they drive them, well; if not, they must go dry. If dry they will not eat their hay well, and cows will not give their expected quantity of milk, and then the boys are found fault with because they gave too much hay and have not milked clean.

To get water conveniently, dig a well near the yard or under the shed, which should join the cellar, and will not generally be more than some 20 or 30 feet, and many of them much less. Should you happen not to find as much water as desired, be sure and dig large, so as to stone up some five feet at bottom, so as to make a reservoir, put up an eves trough on barn, and conduct the water into the well, and then get one of "Ayer's Self-Acting Farm Wells," and use it. You will find your cattle do much better than they will to go dry, or have to go some 20 to 80 rods for their drinks in cold and blustering weather. Your cows will *water* their *milk* much better than their owners, and suit their customers *a vast deal better*, for the quality as well as quantity you will be able to let them have. I have used one of them three years past and know of a certainty the good of them. The cattle will go freely to drink as to an aqueduct, after a few times, and most horses, if dry, will go on the platform the first time without any trouble whatever. The freezing is not half so bad as in common pumps or aqueducts, as only occasionally any trouble occurs, and that easily corrected by a pitcher of warm water. ALVAN WARD.

Ashburnham, Oct. 31, 1859.

LICE ON CALVES.—A number of years ago I had a yearling that grew poor, and I could not help it. Its breathing became so loud that it could be heard several rods. I thought it would die. One of my neighbors told me that he had heard that sour buttermilk was good. I procured some and washed it from head to foot, and in three days his breathing was very regular, and he was as smart as need be. I had no more trouble with him.—*Rural New-Yorker.*

DEEPENING THE SOIL.

The depth of a cultivated soil is always a matter of importance. Lands on which the vegetable stratum is thin, are deficient in permament productive power, and require a much larger application of manure, and more thorough working, than those which have a greater depth. Digging two spits deep, as is practiced in Europe, or gradually going deeper with the plow, tends to obviate this difficulty, and will eventually render the soil productive, if the requisite care be exercised in cropping and manuring.

Where the vegetable stratum is thin, and reposing on a poor subsoil, a speedy change may be effected in the following manner, although from the great cost of labor in this country, it may not be advisable to adopt it except on a limited scale: Along the margin of the piece to be improved, be it more or less, throw the soil, subsoil, sods and all, into a winrow on one side, to the depth which is desired, say twelve or twenty-four inches. Then commence on the side in the direction the improvement is to proceed, and deposit all the mould and sods taken from the top in the bottom of the first trench, throwing that taken from the bottom of the second trench over on to the top of the first, and in this manner, proceed till the work is done. Then cart on old, well-decomposed compost, mixed with an equal volume of green, unfermented stable manure, and work the whole thoroughly into the yellow earth until the virgin soil is approached. A liberal allowance of manure is requisite in order to hasten the decomposition of the soluble silicates contained in the fresh earth, as well as to ensure the more ready absorption of the fertilizing gases from the atmosphere which are necessary to impart vigor and activity to its latent powers. A small quantity of fresh manure sprinkled in lightly as the filling goes on, will be of great service, and, indeed, any kind of vegetable matter, such as straw, forest leaves, or chip manure, will materially assist the process of enriching, and furnish food for the plants.

Lands treated in this manner stand the drought much more successfully than untrenched grounds, and are always found to be more productive, with the *same amount* of manure, than the deepest soils in their natural and unimproved state.

On gardens we have seen it tried repeatedly. It is well known that the sand and coarse gravel excavated from wells and cellars, will, when exposed t atmospheric influences, imbibe princi-

ples of fertility rapidly, where no manure is used, and become in a short time covered with verdure. We have known the common yellow sandy loam taken from the pit and spread upon upland mowing fields with the happiest results. This loam is full of fertilizing salts, which, upon being brought to the influence of the air and rains, impart them to the roots of the grass with surprising effect.

Plaster and charcoal each have a powerful tendency to absorb enriching principles from the air, and in all experiments like the one we have suggested, they can be profitably employed. The second year after digging, a very decided improvement will be apparent, and a single operation will have a decided influence for many years.

Those who have but little land should attend to this suggestion if they wish to make it highly productive. We have tried it on garden lands, accompanied with thorough draining, and think we have doubled the crop,—using no more manure than we did before the trenching.

For the New England Farmer.

THE FARMER AND HIS SURROUNDINGS.

I often think, while at work in the fields, that if I am thankful for one thing more than another —in temporal affairs—it is that I was born a *farmer*, and the *son of a farmer;* that I have been brought up among rural scenes and rural people, and have been taught to labor in agricultural pursuits, and thus brought into intimate connection with the wonderful and mysterious workings of Nature—the manifestations of the Divine Hand. For I believe it is the farmer's privilege to be the "most amiable, the most comfortable, and the most independent man in the world;" and that his occupation will admit of more opportunities for thought and reflection than others; and that it is his duty, as well as privilege, to rise, intellectually as well as morally, in his "heaven-appointed employment."

Do not understand me, however, to despise or disparage other vocations, so necessary to make up the harmonious whole, in the varied round of man's toils, and pleasures, and necessities. But that there is, in the work-shop or manufactory, amid the clink of hammers and din of machinery, in the counting-house, or in the routine of the merchant's duties, such an inducement to healthy thought, and such a field for noble contemplation as is spread out constantly around the farmer, in his free, healthy, out-door employments, is hardly supposable. The silent workings of Nature's immutable laws, in the mysterious germination of seeds, magic unfolding of leaf and flower, and maturing of vegetation, and all the phenomena of attending circumstances, invite his investigation, and fill him with admiration at their exquisite harmony and beauty of adaptation. With them he has constantly to deal, and in his operations it is his study to assist Nature in bringing forth an abundance of things useful to the sustenance of his race, while she beautifies without instruction, and decks his fields with friendly, out-of-the-way flowers, and sprinkles sparkling minerals over the hills.

A pleasing landscape always meets his eye, agreeable in the diversity of noble mountains, near or remote, undulating woods and open lands, and cultivated acres, and fields of "waving grain" in summer-time, or whatever aspect the changing seasons may present. No brick walls shut in his vision, or contract his horizon, but on the dewy morns of summer it is his privilege to enjoy the extended view spread before him in all its freshness and beauty, to drink in the pure, fresh morning air, often perfumed with the sweet odors of countless flowers, and in his every-day vocations to catch the thrilling music of birds, free as nature's air, in their hedge-rows, or rendering him essential service in the orchard and garden, besides ministering exquisite pleasure to his finer sensibilities, if he will but open his soul to their influences. A pure sky is spread above him, across which the white clouds serenely ride, or are suspended in picturesque forms, or in mountainous, silver-crested masses rest on the horizon like old snow-capped monarchs; and all the grandeur of the rising thunder-storm is his to enjoy, of which the city inhabitant knows but little.

Everywhere the tendency is to an ennobling influence, and if the farmer is not virtuous and high-souled, if his mind is not cultivated, and the taste for the beautiful, and an inclination to contemplation are not within him, the fault is chargeable to himself, not to his vocation or surroundings. Indeed, all those elevating influences that poets have sung of, and learned orators love to tell us of, are constantly surrounding the farmer.

It would take a long time to recount all the pleasures the farmer may enjoy if he will; yet, I fear that the mass of farmers are insensible to the *charms* of agriculture, and plod on like the ox they follow, as they walk behind the plow, wholly unmindful of the higher life they might enjoy, and which no one can do so much towards helping him into as himself. Perhaps I am telling you, fellow-farmers, an old story; but let it be harped in your ears till you leave the sluggish routine you have followed your life-time, acquire an appreciation of *progress* and *improvement*, throw off your narrow conservatisms, and adopt liberal views of life, and you will see then that your occupation is a noble one, and that you may ever make it a delightful one.

The occupation of the farmer furnishes him with an ample field for practical and sound thought; a theme for intense study, if he wishes; for indeed the science of farming is little less than a combination of several of the most intensely interesting sciences in nature. The occupation of the farmer may, and should be, an intellectual pursuit; his leisure moments should be improved in study and reading, and thus he will be furnished with food for reflection, while engaged in the physical labor of the field. Farmers are, in too many instances, beneath their calling; if not morally or physically, at least intellectually. Let farmers cultivate the *mind*, as well as the soil. Here is a field productive of the highest pleasures, and conducive to pecuniary advancement.

And now, brother farmers, let us take pride in

our vocation; it is one there is nothing in to be ashamed of, but, on the contrary, much to appreciate and be proud of. With less temptation to viciousness than the city denizens, why may we not be more virtuous? With less temptations to prodigality, why may we not increase in this world's goods as well as they? With more leisure for study, why not be more intellectual?

Springfield, Nov. 7, 1859. J. A. A.

Erratum.—In my article on "Tobacco versus Useful Crops," recently published in the *Farmer*, (Nov. number of monthly,) read in the statement of expenses, for "topping, *mowing*, &c.," topping, *worming*, &c.

THE CLOSING YEAR.

——"We take no note of *Time*
But from its loss; to give it then a tongue
Is wise in man."

The poet means the *passage* of Time. No time is *lost*, that is well spent. There is, we suppose, in reality, no such thing as the lapse of time:—It is all NOW, to the Eternal Mind. What passes, and decays, and disappears from our view, is the finite, that upon which the elements act and change from one form to another.

The object of life that is clearly indicated both by Nature and Revelation, is Progress; progress, not only in subduing and replenishing the earth, but Progress in the attributes of the soul. We are to

"Learn the mystery of *progression* duly:
Not to call each glorious change decay;
For we know we only hold our treasures truly,
When it seems as if they passed away.

Nor dare to blame God's gifts for incompleteness;
In that want their beauty lies; they roll
Towards some infinite depth of love and sweetness,
Bearing onward man's reluctant soul."

If there were no change, there would be no progress. We call it the work of Time,—it is as much the work of Eternity. All is tending to the great work of perfection—upward and onward towards the Infinite that has created and governs all. *Nothing retards and alloys but sin.* Nature is as active and more consistent in her progress, than man. She clothes the earth in the richest attire, and gives perfection to plant and animal, that they may re-appear in still more beautiful forms. The mighty forests fall, and in their progress come to us again greatly increased in value. Mountains and hills yield to the general law, by gradually finding their level, and unfolding the rich treasures which have for ages been hidden in their deep recesses. And so the "tooth of Time" will touch the proudest works of man.

——"I saw him grasp the oak,—
It fell; the tower, it crumbled; and the stone,
The sculptured monument that marked the grave
Of fallen greatness, ceased its pompous strain,
As *Time* came by."

Now that another year has passed,—while its last shifting sands are noiselessly gliding out, it becomes *us*, brother travellers, to review this period of Time, and see what *progress we* have made towards the divine life, the end and object of all. Has it been satisfactory? Does the balance sheet stand fair, and the soul serenely wait the verdict of the Great Judge! Then all is well,—for there has been progress in the very heart of life, and the celestial streams lovingly down into the terrene world.

The year that has passed! It has brought to most the checkered scenes which it never has, and never will, fail to bring. Sickness, and death, and separation; poverty, and want, and disappointment; sad and touching words, stinging realities! They mark the progress of existence everywhere,—but they come all too often, and mainly through our own want of wisdom. Cannot we profit by the past? Let us lay this inquiry upon our hearts, and see that every future thought, and word, and deed, is prompted by that wisdom which is better than rubies, and that shall be our stay and comfort in every time of trial.

Farewell! then, *Old Year!* It has been rich in blessings, and among the best of them have been the pleasant associations with those who habitually read these columns, and for whose prosperity and happiness our frequent communings have excited a sympathy almost as lively as for those that gather around our own hearth-stone. Then let the Old Year go,—let others come and go, and give us no anxious thought, while we strive to *progress* in virtue and heavenly wisdom as well as in material things.

For the New England Farmer.

SEED-EATING BIRDS.

MR. EDITOR:—In your issue of Oct. 15th, Mr. "Aquila" has attempted to read me a homily. He says that all seed-eating birds, such as the yellow bird, deserve a full share of the denunciation for scattering the seeds of injurious weeds. It is an incontrovertible fact that seeds having their flinty coverings broken, will never germinate. Mr. Aquila, nor any other equally scientific man, ever saw any seed-eating bird swallow a seed without first breaking its coating, for it is the kernel required for sustenance, which is not obtainable with its indigestible covering. So much for seed-eating birds, which I protect, having erected several houses on high poles for their encouragement.

"*Videre est credere.*" Fruit, or pulp-eating birds never eat the seed of fruit, if it is avoidable; the seed of the pear or apple they never eat; but their stupidity, or greediness, never discards the seed of small fruits, and that every seed has its germ perfect, after having passed the bird, is a fact not disputable. He says, "many times have I seen robins follow the plow, picking

up every worm and bug that came in their sight. How did he know that they did not discriminate picking up only such as suited their fancy?

"Aquila" asserts that he has seen, this very season, a robin fly from a fence, pick up worms and swallow them, when a cherry tree was quite as near. Was it a Tartarian, an Oxheart, a Reine Hortense, or some Canadian cherry, a robin proof fruit? if so, it ought to be disseminated; a cherry, in reference to which robins will play the Hottentot, and eat worms in preference, would be a godsend to fruit-growers.

Let us, in moulding the character of the rising generation, inculcate a spirit of justice, aid and protect each other, and the time will come when every man can sit under his own vine and tree, and enjoy the fruit of his labor, lawfully protected from freebooters and poachers.

South Danvers, Mass. J. S. NEEDHAM.

HOLBROOK'S UNIVERSAL PLOW.

We have several times spoken of this plow in terms of commendation. The opinions formed of it were gained by actual field trial, on several occasions, and were in accordance with those of some of the best plowmen in Middlesex county. Quite recently we spent half a day in the field, where several plowmen whom we had never seen use it before, held it and used it with several of its different mould-boards and cutters.

The first experiment was with the interval mould-board, which laid the furrows over flat in a very handsome manner. The next was the mould-board used for stubble plowing, with a common cutter. This gave a furrow ten inches deep and twelve inches wide, and when the team was kept exact, the plow would pass along for several rods together without any guiding. The cutter being taken off, the skim plow was attached to the beam, making what is called *the double plow*; by this arrangement the skim plow cut the sward about two inches deep and laid it handsomely away on the bottom of preceding furrows, while the stubble mould-board that followed, rolled up the soil from below, breaking it into thousands of pieces, and laying it into a seed-bed, only needing the passage of a harrow to prepare it for the reception of seeds as fine as onion or carrot. We are confident that this mode of plowing will save a very considerable amount of labor in the after cultivation of the crop. The next trial was in the use of the stubble mould-board on stony land. This was a place in which we had never seen the plow used before, and it certainly accomplished what we had not expected of it. The ground had not been plowed for twenty years, was nearly as thick with stones as they could lay, and flanked occasionally with the roots of bushes. Yet we never saw a plow work steadier or better. In passing over a large stone it would catch in more readily, and work up to and away from the stone, with more ease and certainty than any *short* plow we ever saw.

The last trial which we witnessed that day was in a meadow. The plow was rigged with a wheel cutter and a very long, tapering mould-board. Six stout oxen were attached to it, but the off-ox of each pair was enabled to travel on the sward —instead of the bottom of the furrow—by having an iron rod start from about the centre of the beam to the forward end of the same, and standing off from it about six inches in front. The furrow slice was cut ten inches deep and sixteen inches wide, and the meadow—three-quarters of an acre—was completed without a baulk or bad place in it, and a harrow passed over it twice would have fitted it admirably for being laid down to grass!

The furrows in all these trials were not laid over by guess work, but were as scientifically moved as is the locomotive, or printing press, or power-loom. The most indifferent beholder could see beauty, as well as utility, in the operation. We hope our plowing readers will look at this new plow for themselves.

For the New England Farmer.

GARDEN AND FIELD WORK.

TRANSPLANTING TREES.

Is the fall or spring the best season to transplant trees? In replying to this question, I would say that it depends upon the weather and state of the ground. If, during the fall, we have warm days accompanied with rain, extending the growth to a late period, the wood being unripe and succulent, I should rather hesitate in commending the fall; on the other hand, if the ground is dry, and the early frosts being sufficient to take off the leaves, the wood of the last year is well ripened, I should commend, in this latitude, to set the pear, apple, cherry, currant and gooseberry in the fall. The peach, apricot and nectarine, I should invariably set in spring.

CURRANTS AND GOOSEBERRIES.

Currants, (the White Dutch is the finest variety for general culture,) gooseberry, (Houghton's Seedling,) blackberry, (Dorchester Seedling,) raspberry, (Franconia Red,) can be cultivated with profit, and under circumstances as described above, the fall is a good time to set them.

SEEDLING TREES.

Trees that have been grown from seed the past summer, such as the peach, pear, apple and quince, that have not attained to a greater growth than six or eight inches, had better be taken up and laid in, as it is called, in a shady place, covering them slightly with litter, sufficient to keep them frozen through the winter, as they are apt to be thrown out by the frost if suffered to remain in the seed bed.

HARDY GRAPES.

Grape vines trained upon a building or wall in a warm exposure are exceedingly apt to be

killed, particularly the wood of the previous year, by the warm days in winter. These should, after the fall of the leaves, be taken down and laid along upon the ground, that they may not be exposed to the alternate freezing and thawing of that season.

GUANO.

In our hot and dry climate, the Peruvian guano, when applied to the land in spring, often fails of producing any marked effect; on the contrary, if applied in the fall, spreading it over the soil of our gardens, and turning it in by the spade, we shall find it a good fertilizer, as well as more lasting in its effect than when applied in April or May. The usual rate of manuring is about three hundred pounds to the acre.

INSECTS—CHERMES.

The currant is subject to a curl or thickening of the leaf in spring, produced by a minute insect called *chermes*. I have found that by applying air-slaked lime around the bushes early in the spring, I have entirely succeeded in keeping off this pest. I have also for some years applied spent tan around the gooseberry, (Houghton's Seedling,) with marked effect, in staying the ravages of the gooseberry worm. J. M. IVES.

Salem, Nov., 1859.

EXTRACTS AND REPLIES.

ABOUT FATTENING TURKEYS.

Will you, or some of your correspondents, inform me of the best mode to fatten turkeys? Whether to shut them up, or to let them run at large, and what kind of food to give them?

A SUBSCRIBER.

Oakham, Mass., Nov. 1, 1859.

REMARKS.—Turkeys are sometimes placed on a comfortable roost in a dark cellar, and will fatten rapidly; but it is a cruel process to deprive the birds of the cheerful light. A better way is to feed them liberally for two months before their flesh is wanted. Give them a variety of food, such as corn, oats, wheat or barley, and once a day a mess of boiled potatoes mashed while hot with Indian meal, mingled with scraps, bits of fresh meat, or in the want of them, a little lard or tallow, just enough to season the whole. If they are fed regularly on such food, and have a supply early in the morning, they will not ramble much, and will continue to grow as well as fatten freely. There may be a better way than this, but if there is, we have not learned it.

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CULTIVATION OF NATIVE GRAPES.

I have noticed in many of the distributions of premiums for specimens of grapes, that, to judge by their relative amounts, the greatest importance is attached to the cultivation of the foreign varieties. It seems to be worth considering, whether, if the general interests of the fruit-growing and fruit-consuming community are considered, a different principle might not be adopted with advantage. It would seem to be of more importance to discover and introduce varieties which are capable of general and out-of-door cultivation, than of such as require the aid of expensive buildings and artificial heat. The modes of artificial culture are already sufficiently understood, and the kinds which require it, are not likely to be improved or increased in number. It is far different with our native grapes. It is very desirable to find or produce those which will ripen early, and which are of more excellent flavor and texture than the common varieties; and also that the mode of managing them should be more generally understood.

No doubt the noble bunches of hot house grapes which we see at horticultural exhibitions present a more engaging outside to visitors than any of the native varieties either do, or probably will. But if the object of their exhibitions be, as it is presumed to be, to encourage a taste for gardening, and also for that kind of gardening which will be more useful, then it would seem that the latter should claim the greatest share of attention. Artificial cultivation is within the reach of but few. Out-of-door cultivation is open to every one, both in city and country, who has a house to live in. The former must be confined mainly to the rich, and those who cultivate for the market; while there are none so poor that they cannot, with a little pains and at almost no expense, raise fruit enough for their own use by the latter method, if they only knew the kinds they should select, and the principles on which they should be managed.

The success which has attended the recent attempts at the improved cultivation of our native varieties gives good ground for expectation that by continued attention a still greater improvement may be attained. What is needed is appreciation and encouragement. The foreign culture will take care of itself, and is not likely to become any better than it is. The native is yet in its infancy, and needs all the aid which emulation or reward can give it. Z. S.

REMARKS.—Excellent suggestions—they lead us in the precise direction which ought to be be pursued.

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WITCH GRASS.

In your monthly *Farmer* for November, Mr. George Morrison asks, "If you, or any of your correspondents, can tell him where he can get witch grass seed, and at what price, per bushel?" For my part, I think he will not be able to find much of the seed that will germinate; but if he will just take the trouble, he can buy up any quantity of roots, and I will risk their growing anywhere. I guess there will be no fear of their not taking, even if he takes very little trouble with them. If he would apply to me, I would sell him a lot pretty cheap.

ANTI-WITCH GRASS.

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HOW TO MAKE HARD SOAP.

Seeing in the monthly *Farmer* an inquiry as to the way of making hard soap, I will, in reply, give my experience. Some twenty years ago, being about to change my place of residence, and having on hand a quantity of excellent soft soap which it was not convenient to remove, I re-

marked that I wished it was hard soap. My husband, who was something of a chemist, said, it could easily be done, by heating it and adding common salt. I did so, adding the salt a little at a time, and trying it, by cooling a little of it. When I found a thick scum rise to the surface, it was dipped into tubs and allowed to stand until next day. The hard crust was then taken off, melted and poured into moulds, and when cold, cut in bars and dried. It proved very good—the older and drier, the better. MEG.

Nov., 1859.

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BARK BORERS.

I think the disease in the trees of your "Still River" correspondent is evidently caused by a species of bark borer.

I have, within a few years, had one tree destroyed, and two others seriously damaged by this insect. It usually attacks the tree on the south side, although this is not invariably the case. I know of no remedy except digging them out with a knife. I have seen a description of this borer in some of my agricultural periodicals recently—think it was the *Country Gentleman*—but cannot now refer to it. I believe, however, it takes some two or more years to complete its growth, which would give time to destroy it before serious mischief was done, if the trees were closely watched. WM. F. BASSETT.

Ashfield, Mass., Nov., 1859.

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ARTIFICIAL GUANO.

I saw in the November *Farmer* a formula for artificial guano; would night soil be better as a substitute in place of garden mould? I see you have referred to Dr. Reynolds—will he please answer the question? A. L.

For the New England Farmer.

THE LARGE BRONZE TURKEY.

MR. EDITOR:—Having been requested to furnish for the *N. E. Farmer* a description and history of these noble birds, with my method of raising, I would say, as to their history, the first I heard of them was at Point Judith some years since; from there they were brought into this county, and by judicious crossing with other families of the same breed, their size has been increased until I was able to show a male bird last April, which weighed 39 pounds. The hens are much smaller, yet I have one weighing over 20 pounds, and a friend of mine has one weighing 22 pounds. I knew a one-year-old cock, after it was dressed, weigh 32 pounds, and have known 10 young ones dressed in winter, to weigh 200 weight. These were, of course, extra birds, but a cock well cared for seldom weighs less than from 25 to 27 pounds, when dressed, at one year old. For tame and quiet habits, beautiful plumage, and fine, delicate, juicy flesh, I think they have no equal among domestic turkeys. The plumage of the cocks is thick and glossy, with metallic reflections, rendering them exceedingly beautiful; that of the hens has less bronze, yet is strongly marked with it. I will give you my method of raising them in another article.

H. S. RAMSDELL.

West Thompson, Conn., Nov. 1, 1859.

For the New England Farmer.

OPINIONS OF THE AMERICAN GUANO.

[Letter from Dr. Holmes, Editor of the *Maine Farmer.*]

Winthrop, Me., Oct. 19, 1859.

JOHN MEANS, ESQ., *Augusta, Me.*

DEAR SIR:—I have made use of the American Guano that I purchased of you last spring, and am well pleased with it as a fertilizer. I tried a comparative experiment with it in the following manner. A portion of a cornfield was marked off. The American guano was used in the hill, say a gill to each hill; beside this I applied the Peruvan guano in the same way and quantity, and beside this the fish guano in the same manner and quantity. All the rows of corn did well, and I could perceive no particular difference between them. This proves your American guano to be equally as good as other kinds, or, in other words, equally as good as what has hitherto been considered the best.

I have not had opportunity to give it a fair trial as a top-dressing to grass land, but intend to do it next spring. There does not appear to be so much free ammonia escaping from the American guano as from the Peruvian, but it seems to contain enough of it, and as far as I can judge from its action on crops, and not by actual chemical analysis, it contains as much of the other fertilizing ingredients, such as phosphates and other salts, if not more than the Peruvian. With much respect, yours truly,

E. HOLMES.

REMARKS.—In confirmation of the opinion which Dr. Holmes has formed of the value of the American guano, we will state that we have used it for two seasons with the happiest results. The first trial of it was on corn where its effects were distinct through the season; the corn coming on earlier in the spring, growing faster, with a dark green color, and producing abundantly in the ear. This last season we tried it through the centre of a field of corn with similar results. It also produced carrots and potatoes, without other manure, of most excellent quality, and liberal in quantity. On beets and parsnips the result was equally marked. But the point to which we attach the most importance is, that it may be used on any crops as a stimulant and fertilizer in the hill, without endangering the germination of the seed, and thus give corn, or other plants requiring a long season, an early start, and secure their perfection before the time of frosts. In our short, cold and wet springs, it is essential to give the corn crop an early growth, and this we have secured by the use of the American guano, better than in any other way.

We hope our farmers will generally try it, and that the price will be kept within moderate limits, so that all may avail themselves of its advantages. We shall continue to use it freely, if the price does not exceed $40,00 per ton.